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ORIGINAL ARTICLES.

A CASE OF EPILEPSY CURED (APPARENTLY) BY THE CORRECTION OF AN ERROR OF REFRACTION.

Read before the Chicago Medical Society, January 16, 1888.

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The following case, to which I wish to call your attention, first came under my observation in June, 1882:

Mr. T., æt. 24 years, 5 ft. 9 in. in height, weight 160 lbs., well proportioned, features regular, except that eyes are deeply set and appear small; occupation student.

He consulted me for mental confusion and inability to read or study without flushing of face and pulsating of superficial arteries, with sensation of pounding in back of head and neck, with marked sensations of vertigo which would disappear when eyes were closed. At times, following prolonged effort, the confusion of ideas was painful and was accompanied by visions which he recognized as such, at least a part of the time. He had at this time some slight disturbance of digestion and constipation, due apparently to sedentary life. He admitted masturbation in early boyhood, but not since; had had frequent seminal emissions, more marked during the past two years and always following hard study. I gave him such treatment as his case seemed to demand, with the result of benefiting his digestion; otherwise the case remained about the same. About this time, for some conduct not in accord with the rules of the institution, he was brought before the Faculty. The President, finding that he had consulted me, came to find out whether the gentleman was really ill, or whether there was good reason for his strange actions and low standing in the school. From him I learned that the patient was constantly manifesting strange mental phenomena, by them attributed to viciousness and low mental and moral character. At times he was extremely dull and morose, and again almost brilliant and exemplary.

I then inquired more carefully into the case from himself and others, and diagnosed a condition bordering on *petit mal*, with impulses. I also found that he was unusually bright as a critic of orations and sermons, while it was with difficulty that he was able to grasp the matter of a printed page. He was advised to leave school for some occupation less sedentary and requiring less mental work. This he did. At the end of the summer vacation he returned apparently perfectly well.

About this time I left that field of work and lost track of my patient. From a student in the institution at that time I learned that for some weeks following his reëntrance he did good school work, but resumed his old habits and, after a stormy time with the Faculty, left the school. After some difficulty, he was admitted to the ministry, for which he had been preparing. About two years subsequent to my first acquaintance with him, during a sermon, he was attacked with a marked epileptic seizure, and from that time on he was subject to attacks more or less severe, occurring in the frequency of from one a day to one in two or three weeks.

Restraint was considered advisable, and he was confined in an asylum at intervals for about two years. During one of his more prolonged intervals of immunity from fits he escaped from the asylum and went to a neighboring State, where he endeavored to resume his work, but the return of the malady again unfitted him for ministerial labor and he resorted to canvassing. The study necessary for success in this field soon increased his trouble.

About this time he recalled my opinion and prognosis of his case, and finding my address called upon me for advice. He came to me in August, 1886. I found him at my office in a truly pitiable plight. He had been a number of hours on the cars and had had numerous seizures more or less severe; he was hungry, bewildered and incoherent, with marked delusions. I hastened to put him in better condition, and on the following day elicited some of the facts given above.

His trouble continued in spite of sedatives, and I referred him to Dr. C. D. Wescott for examination and advice. Dr. Wescott gives me the following notes of his case:

"Mr. T. first called upon me October 23, 1886. I pronounced him an epileptic as he entered my office, from his appearance alone; the congested countenance and excessively mobile pupil. He described very well seizures of *petit mal* occurring every two or three weeks with or without unconsciousness, frequently followed by uncontrollable impulses and hallucinations. His judgment was evidently impaired, and he presented every appearance of one suffering

from the effect of that disease. Among the prominent symptoms was his inability to read without the greatest fatigue and general nervous irritation. I put him on small doses of the mixture of bromides and gave him careful directions as to diet. The bromides he took only a short time. I gave him a stomach tonic and laxative. He appeared to improve for a short time and then remained in about the same condition, always being irritated by any attempt at mental effort.

"The only attack which I know of his having, following Dr. Colburn's treatment, was about January 25, 1887. He came into my office feeling unusually well, jovial and lively. A little incoördination was noticeable in his gait and, in spite of my acquaintance with the precursor of epileptic mania, I was inclined to suspect alcohol. After assuring myself that he had had no liquor, I prescribed saline cathartics and sent him home. In the evening I was sent for and found him in a condition of mild mania, with delusions and hallucinations and a fear of impending evil. The attack was easily controlled with chloral and bromides and he was soon about again, but for some days was dull and depressed and incapable of mental or physical exertion. Since the above indicated attack I have seen him but seldom, and not at all of late, but when I talked with him last his mind seemed stronger, his articulation was more natural, and his countenance wore a more intelligent and natural expression."—C. D. WESCOTT.

On referring to some private notes made in 1882 I found that I had at that time examined his eyes and obtained .50 D. manifest and 2 D. latent hypermetropia. I at once acted on the suggestion of Dr. George T. Stevens, of New York, who had kindly admitted me to his private cases. I atropinized my patient, verifying my former examination. Also found insufficiency of the external recti equal to 8°, which was treated by exercise with the prisms, soon obtaining a more normal balance of the recti muscles, and prescribed a + 2 D. for constant use. He was directed to discontinue the treatment instituted by Dr. Wescott. From this time on there was a marked improvement of all his symptoms, mental and physical. During January, 1887, he had a marked attack, as mentioned by Dr. Wescott, but at that time there was also quite an increase of temperature and disturbance of stomach and bowels, showing that the possible exciting cause of this attack was some malarial disturbance.

For about one year he has had nothing resembling his former trouble. His mind has become active and his personal appearance changed to that of a man in perfect health. And he is now a perfectly well man, taking long trips through the country; the trusted employé of one of our large publishing houses. For about a year he has used his glasses for near work only.

In June, 1887, my patient brought his mother to the city for advice. I referred her to Dr. Lyman, and from him have the following notes:

"The case is one of neurasthenia with tendency to masked epileptic convulsions with vertigo, tottering, and unsteadiness of gait."

Dr. Lyman referred the case to me for an examination of the eyes. I found on examination that there was hypermetropia of 2 D. 1 D. ast. and presbyopia of 2 D., all of which I corrected. Her daughter, who accompanied her, was emmetropic with no nervous tendencies, and resembled her father, while Mr. T. very strongly resembled his mother. Since the treatment instituted by Dr. Lyman, iron, quinine, strychnia, and the constant use of glasses for distance, the mother has improved and is now quite strong and well.

Mr. T. has a brother now confined in an asylum for some form of insanity. I have written for the history of this case. I learned from the mother that the brother of my patient was subject to sick headaches, school headaches, etc., and that he was an erratic child, gradually increasing in peculiar tendencies until marked mental disturbance was developed.

To me the point of special significance is: *The hereditary hypermetropic* error of refraction; in the mother, apparently causing nervous prostration; in the son, all of the progressive symptoms of cerebral disturbance up to mania; the apparently direct relation, in case of Mr. T., between the amount of work done and the progressive congestion of face and brain; that any return to the use of the eyes would precipitate severe nervous explosions, and that the attacks were seldom caused by other irritation; that the correction of the hypermetropia was followed by a great improvement till, within four months from the time of the adjustment, the glasses had so far relieved his trouble that he has had no nervous explosions to date. Headaches, indigestion, constipation and seminal emissions are perfectly relieved, and the patient is able to do a large amount of work, and read, without trouble. In a letter just received from Mr. T. he says:

"Although I have always had a desire to be a student of general knowledge yet, whenever I attended school, I was considered lazy and entirely out of my place, and until the latter part of my school days I was made sport of both by my associates and instructors, because they could see no excuse for me, as I seemed to be in perfect health.

"Later on my friends noticed that my face was flushed at times, and my general dulness of expression. Many accused me of taking opium.

"In recitation work I always stood the lowest in my class, but in examinations my standing was a great deal better; which, of course, my instructors were at a loss to know how to account for. I do not think that the cause of my poor recitations was laziness, but it was owing to the difficulty which I had in reading. Even aside from the dry reading of textbooks I was never able to read more than a few minutes at a time without suffering pain from my eyes to the back of my head, and in fact my whole head seemed to be very much irritated, which made me flighty at times. I would have impulses to jump and scream. These symptoms of disorder were more severe if I did any reading in the evening.

"While sitting alone or lying in bed I would see flashes of light, imagine things, and in my mind would go on a journey and perform daredevil feats. At

times I would be conscious of being in my room during such trains of thought, and at others not. Sleep was an impossibility till 3 or 4 o'clock in the morning.

"This trouble grew upon me until I was forced to leave school. Then I spent my time in going from place to place preaching as best I could, but doing very little reading, and I thought I was getting better.

"About two years and a half ago I was called to attend a funeral. For a few weeks previous to this call I had not been feeling as well as usual. At first I refused to go, but I was finally persuaded to go upon a promise that little would be required of me. I had read but a few sentences from the book which is used on such occasions when I saw a quick succession of dark waves pass before my eyes, I lost control of my muscles, and the next I knew I was lying on a bed in the next room. Dr. —, who was standing by me at the time, said that all he noticed until my muscles gave way was that my face flushed a little. However, I was soon able to finish the service and go home. These spells became more frequent and severe till finally I was put in an asylum.

"So far as I know I never had a convulsion, and was not always wholly unconscious, but always lost control of my muscles. They never came on unless I overdid in some way either physically or mentally, or under some excitement.

"The asylum gave me temporary relief, but after I had been out a short time the trouble returned. And until I had put myself under your treatment for a few months, I did not think that there was any help for me. Since then I have gained in health and am now able to do a good day's work without any symptoms of the old trouble."

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PRIMARY TUMOR OF THE BROAD LIGAMENT. WITH A TABLE OF 17 CASES.

Read before the Chicago Gynecological Society, Nov. 18, 1887.

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I have the pleasure of presenting a specimen of a fibroid tumor resembling those of the uterus, and calling your attention to a small group of neoplasms termed by Sänger "primary dermoid tumors of the broad ligaments."

The patient from whom this specimen was removed was a well-developed woman, 35 years old. She had been twice married. By the first marriage she was without issue. About a year after the second marriage, she gave birth to a child that is now 3 years old. At this confinement there was a laceration of the cervix uteri, which was operated upon in February, 1886. The pelvis was thoroughly examined at that time, while the patient was under the anæsthetic, and nothing abnormal detected. Following the operation there was a slight retroversion, which was treated with a pessary for a month or two. Toward the last of May, 1886, this pessary was removed by the patient herself. The menstruation was scanty in June, and she consulted her physician, who concluded from an increased size of the uterus that it was pregnant and refrained from further examination. In July again the menstruation was normal, and an examination at that time first discovered a small tumor, about the size of a black walnut, just behind the uterus. The patient was put in the knee-chest position, and the tumor pushed back almost out of reach. It was movable, and free from the uterus. The tumor had all the appearance of a displaced, enlarged ovary, and it was so considered at the time. Repeated examinations during the following months revealed its rather rapid growth, and its increasing immovability. A dull fluctuation was repeatedly detected. At last, the inconvenience to the patient became so great that she decided for herself that it should be removed.

The patient had never had any pelvic inflammation, and the puerperium was unattended by sepsis.

I had the privilege of making the necessary antiseptic preparations antecedent to the operation. Every scientifically indicated preliminary precaution in the preparation of the room, the instruments, the patient and the operators was taken. The room was large and airy, having three south windows, and one opening to the west. The house was a frame dwelling which had been in use many years. The floors were carpeted throughout the house. I had the carpet removed from the operating room, which was on the second floor, all the wood-work thoroughly scrubbed, and the walls freshly papered. There was not sufficient time to lay a new floor, and the old one was too much worn to be made clean. I had it covered with a carpet of thick white duck. After this had been tacked down, all the wood-work and the necessary furniture and this carpet were scrubbed with a 1:1000 sublimate solution. Just before the operation the temperature was raised to 90° F., and a pound of carbolic acid evaporated in the room.

The operation was performed on the morning of June 5, 1887. There were present the operator, Dr. J. W. Streeter, three assistants, and the nurse. Upon opening the abdomen, it was found impossible to bring the tumor in the line of the incision. It lay close to the latterally turned uterus, and occupied all the space in the right side of the pelvis. It was found impossible to move it in any direction more than an inch. Two-thirds of the tumor was visible, covered by smooth peritoneum, which was reflected backwark and directly forward upon the walls of the pelvis. No ovary was found on the right side. The left ovary seemed perfectly normal. The tumor felt hard, elastic, and smooth. A transverse incision was made through its peritoneal covering, and the tumor carefully enucleated with dull instruments. There was very little hæmorrhage. The broad base from which the tumor was removed was then sewed through with a curved needle and strong silk. This was tied at every stitch. The peritoneal edges were trimmed off, turned in, and fastened with fine silk. The operation lasted two hours. During the following day the temperature rose to 103° F., but it gradually fell to below 100° at the end of the second day. There was no other unfavorable symptom.

TABLE OF SEVENTEEN CASES.

Observer.	Age of Patient.	Tumor Recognized.	Symptoms.	Fluctuation.	Diagnosis before the Operation.
1.—Schetellig. Arch. f. Gyn., I, 259.	41 years. Multipara.	2 years.....	Tumor elastic; in general form spherical; in places irregular and hard; above the symphisis a tympanitic zone. Uterus movable and normally located.	Fluctuation indubitable.	Ovarian cyst. Diagnosticated by another surgeon.
2.—Schmid. Prager med. Wochenschr., 1878, No. 35, 260.	35 years. One child.	1¼ years after delivery.	After previous peritonitic symptoms, rapid development in the right pelvic cavity of a movable tumor. Decendens uteri. Prolapse of the ant. vaginal wall.	Wanting.....	Solid tumor of the right broad ligament. By internal examination both ovaries were recognized.
3.—Miculicz. Wien. med. Wochenschr., 1879, No. 21, 261.	.....	.....	Periodical pain in the pelvis. For two or three years ascites present. Umbilical hernia since one year. Tumor freely movable, somewhat uneven, as large as a man's head.	Wanting.....	Solid tumor of the broad ligament.
4.—Gayet. Lyon Médical, 1874, No. 9, p. 273.	42 years. Multipara.	7 years.....	All the appearance of a simple ovarian cyst.	Present. Very pronounced.	Ovarian cyst with short pedicle.
5.—Sänger. Arch. f. Gyn., XVI, 284.	19 years. One child.	10 months.....	Failure of the menses to appear for 7 months. Patient considered herself pregnant. Prolapse of the uterus and vagina.	Present. Very pronounced.	Left sided ovarian cyst.
6.—Bardenheuer.—Drainirung d. Peritoneal-hoehle, Stuttgart, 1881, S. 113–118 (in Hegar).	.....	.....	A large tumor which was located deep in the pelvis and extended somewhat above it.	.....	.....
7.—Péan. (In Hegar.)	.....	.....	.....	.....	.....
8.—Buschmann (operator, Billroth). Wiener Wochenschrift, 1880, No. 28.	28 years. 4-para.	.....	Increase in the circumference of the abdomen for three years. Dull elastic consistency. The percussion dulness extended to that of the liver and spleen.	.....	.....
9.—Rydygier. Deutsche Zeitschrift für Chirurgie, XV, p. 279.	Multipara.	.....	.....	Pseudo-fluctuations.	Solid pediculated tumor of the uterus.
10.—Chimiaux. Arch. de Tocol. et des mals des femmes, Juillet 1880, p. 439.	32 years. Multipara.	.....	The tumor grew steadily but without pain. It appeared to arise from the uterus. It moved with its movements. Remarkable developments in the course of a half year.	.....	Solid pediculated tumor of the uterus.
11.—Schröder. Sitzung der Gesellschaft f. Geburtsh. u. Gynaek., Berlin, June 8, 1880. Berlin klin. Wochensch., 1881.	.....	.....	.....	.....	.....
12.—Freund. Gynæcologische Klinik, '85, p. 289–293.	32 years. Multipara.	Recognized 5 yrs., walnut sized, somewhat uneven, solid, elastic, growing more backward, separated from two smaller cherry-sized tumors by a distinct groove. Uterus movable. Both sound ovaries easily recognized.	Pain in the pelvis several weeks after her first normal labor, protracted menstruation. The tumor grew slowly, but undoubtedly.	None.....	Fibroid of the left broad ligament.

TABLE OE SEVENTEEN CASES.

Condition Found at the Operation.			Operation.	Anatomical Diagnosis.	Result.	Remarks.
Pedicle.	Uterus.	Ovary.				
Long, somewhat thick; attached to right broad ligament.	Normal	Normal	.....	Cystomyoma teleanglectodes cavernosum ligamenti lati dextri.	No operation; death from chronic peritonitis spreading out from local suppurative peritonitis.	Uterus free without any attachment to the tumor. Left ovary normal. Right ovary drawn up on the anterior, under surface of the tumor.
Thin, in necrosis.	Free, infantile.	Right ovary in necrosis wholly separated from the tumor. On the left ovary a pea-sized pedunculated fibroma.	.....	Fibro-sarcoma of the right broad ligament. Wgt. 16 lbs.	Pedicle dropped. Course without fever. Healing by first intention.	....
Wanting ...	Normal	Normal	.....	Fibroma of the right broad ligament. Tumor strongly œdematous. Wgt. 10 lbs.	Pedicle dropped. Recovery retarded by secondary intra-abdominal hæmorrhage and abdominal abscess.	On the ovarian side of the tumor, arising from the right parovarium, a small dermoid cyst.
Short and small.	Normal	The left ovary behind the anterior tumor œdematous, beset with follicular cysts, free from the ligamentum latum. Right ovary apparently normal.	.....	Cystomyoma of the left bro'd ligament.	Attempted removal. Suturing of the residue of the cyst in the abdominal wall. Gangrene of the pelvic tissues. Death on the 14th day.	.....
.....	.....	.....	.....	Fibromyoma hydropicum ligamenti lati sinistri. Double tumor. The anterior small, intraligamentous, the large one extra ligamentous, intra-peritoneal and pedunculated. Weight 16 lbs.	.....	.....
.....	.....	.....	Laceration of the anterior wall of the rectum. Intestinal suture. Injury of a large parametrian blood vessel in arranging the drainage.	Intraligamentous myoma...	Death four hours after the operation from hæmorrhage.	.....
Short	.....	.....	Pedicle treated as an ovarian pedicle.	Medullary sarcoma of the broad ligament.	Death on the second day of peritonitis.	.....
None present.	Free, without attachment to the tumor.	.....	Vigorous hæmorrhage in separation from the peritoneum. The tumor had grown from the back side and turned forwards.	Retroperitoneal fibro-myoma, by which the kidney which lay in the pelvis was deformed. The sessile tumor lay between the leaves of the ligamentum latum. Weight 36 pounds.	Death from peritonitis on the fifth day.	The tumor was very vascular and gave the impression of a firm, jelly-like tumor. It was covered with a very thin peritoneum.
None	On the uterus, two subperitoneal tumors abo't the size of small apples	Free.	The tumor was raised out of its place without the aid of instruments and without the application of a ligature; the anterior leaf of the broad ligament was grown fast to the abdominal wall.	Fibromyoma between leaves of the right broad ligament. The tissues were here and there colloid degenerated.	Recovery.....	.....
Present	Free	Free.....	The tumor was attached to a pedicle which arose from the left broad ligament.	Cysto-sarcoma of the left broad ligament; wgt. 12 lbs.	Death on the 13th day of peritonitis, which certainly had arisen from an abscess in the neighborhood of the pedicle.	The tumor presented a trembling, soft mass, made up of wide-meshed tissue with fist-sized cavities within. No autopsy or microscopical examination of the tumor was made.
.....	.....	.....	.....	Fibro-myomatous tumor....	.....	Discovery of tumor, which was from the left broad ligament, during the removal of an eight-sided ovarian cystoma.
None	Movable....	Both present, sound	Enucleation.....	Myofibroma cysticum intraligamentare. Wgt. 23 lbs. Prof. Cohnheim confirmed the diagnosis.	After the operation there was a secondary hæmorrhage wh. was controlled by compression. Trismus and tetanus on the 6th day, in spite of which patient recovered and left the hospital after six weeks.	The ureter lay bare in enucleating the sessile tumor.

TABLE OF SEVENTEEN CASES—CONTINUED.

Observer.	Age of Patient.	Tumor Recognized.	Symptoms.	Fluctuation.	Diagnosis Before the Operation.
13.—Freund. Loc. cit.	30 years. Nullipara.	.....	.....	.....	Double fist-sized myoma of the uterus and a tumor in the left broad ligament.
14.—Freund. Loc. cit.	30 years. Sterile wife for 10 years.	14 days after the removal of a sub-peritoneal myoma as large as a man's fist, a plum-sized tumor of the left broad ligament was detected.	.....	.....	Solid tumor of the left broad ligament which became as large as a child's fist, still separated from the uterus by a distinct furrow.
15.—Bantock. The British Gyn. Jour., X, August, 1887.	.....	Tumor recognized nine months before operation, soon after the birth of the last child.	.....	.....	Believed to be ovarian..
16.—Fenger. Unpublished.	29 years. Multipara.	About one year.	Caused little inconvenience, but aroused the suspicion of pregnancy.	None.....	Solid tumor of the left broad ligament. Separated from the ovary and uterus by a recognizable space, filling the pelvis and extending half-way to the umbilicus, somewhat movable. Uterus and ovary separately movable.
17.—Holmes. (Operator, Streeter.) In this article.	35 years. 1-para.	Tumor recognized eleven months before operat'n, when it was movable from the uterus.	.....	Pseudo-fluctuations.	Tumor of the right ovary

The sutures were removed from the abdominal wound on the fourth day, and the second and last dressing applied to the abdomen. There was not a particle of suppuration at any time, nor any pain in the line of the abdominal cut, or in the region of the operation. There was just a show of blood on the vaginal tampon where it lay against the *os uteri*. The patient was somewhat troubled with borborygmus during the first week, and at the end of a month had an attack of gastro-enteritis. She has now regained her former health and strength, and has menstruated regularly and normally.

The tumor has all the appearance of a uterine fibroid. It is almost perfectly spherical and smooth. It is about the size of a man's fist. The cut surface is smooth and white, with a few cavernous sinuses, filled originally with a clear serous fluid. A piece of the fibrous capsule is still attached to one side of the tumor. The drawings which I present were made from stained sections, with a one-tenth inch immersion objective, and an inch eye-piece. The nuclei resemble very much those of unstriped muscle fibres. There is very little, if any, pure fibrous tissue to be found in the body of the tumor. Near the blood-vessels, the nuclei are ovoid or spherical, and very large. These are, no doubt, the round cells noticed by Kleinwächter (49) in small uterine fibroids. They seem to be well nourished cells, undergoing rapid mitosis, or indirect cell division. These large round cells are easily distinguished from transverse sections of the long nuclei by their size and arrangement.

This tumor, then, is leiomyoma, that is, a myoma that originated from a matrix of smooth muscle tissue.

Such a matrix is found in the uterus, in the uterine ligaments, in the base of the ovary, in the walls of the bladder, and in the abdominal wall.

(a) A consideration of the history of the case shows conclusively that this tumor did not originate as a sub-peritoneal fibroid of the uterus. When first observed, it was quite a distance from the uterus, and freely movable from it in the pelvis. The pelvis was thoroughly examined under an anæsthetic four months previous to the appearance of the tumor, and nothing found.

It does not seem possible that a fibroid of the uterus could be so completely displaced either by puerperal contraction, or by the traumatism it suffered at the operation in February.

There remain to be considered the possibilities of an ovarian or a ligamental origin for our tumor.

(b) We have four methods of demonstrating the presence of smooth muscle-fibres in the broad ligament, the embryological, the anatomical, the physiological, and the pathological. The uterine ligaments contain plain muscle-fibres, which are prolongations of the superficial embryonal layer of the uterus. These fibres extend through the ring into the mons veneris, and out on the abdominal wall to the *linea alba*, and up over the posterior wall of the bladder.

Anatomically, these smooth muscular fibres have been found and described by Rouget (14), Klebs (16), Henle (17), and Luschka (19). They are also mentioned in Quain's Anatomy.

TABLE OF SEVENTEEN CASES—CONTINUED.

Condition Found at the Operation.			Operation.	Anatomical Diagnosis.	Result.	Remarks.
Pedicle.	Uterus.	Ovary.				
None	Free	Both present	After enucleation of the myoma of the uterus, a tumor of the ligament, the size of a 5 mo. gravid uterus, was removed. The peritoneal covering of the tumor was cut so that a continuous suture restored the relations of the parts to those of a normal ligament.			The left ureter lay under the side of the tumor.
					No operation	
None	Free	Both present	Sub-peritoneal enucleation. Removal of diseased right ovary.	Fibroid of right broad ligament. The tumor arose in outer portion of the ligament beyond the ovary, which lay on its inner aspect.	Recovery.	Peritoneum freely movable over the surface of the tumor.
None	Free	Both pres't, healthy	Enucleation, partial closure of the peritoneal wound. Drainage by means of a Miculicz's drain introduced into bottom of the unclosed peritoneal wound.	Fibroid of broad ligament. Weight, 4 lbs. The cut surface showed multiple nut-sized and larger fibroids melted down into one large and almost perfectly spherical tumor.	Death from sepsis on the third day.	The omentum adherent to the tumor over a considerable surface contained enormously enlarged blood-vessels (finger-sized), furnishing the principal blood-supply of the tumors.
None	Free	Not found	Transverse incision thro' the broad ligament and enucleation of the sessile, immovable tumor.	Leiomyoma of the right broad ligament; weight, 10 ounces.	Recovery without complication. In perfect condition Nov. 28, 1887.	

They have also been assigned an important rôle in initiating labor (18). In examining the wall of cysts of the broad ligament, Spiegelberg (20) and Lawson Tait (21) have seen layers of unstriped muscular fibres three or four millimetres long. Other investigators have sometimes found and sometimes missed these bundles in the walls of parovarian cysts. There is, then, no doubt that a suitable matrix for the development of leiomyomas is found in the broad ligament.

Graetzer (26), investigating the origin of the tumors of the abdominal wall, has opened up all the possibilities of the origin of fibroid neoplasms in every part of the body. According to the theory of Cohnheim, there must be a matrix derived from the mesoblastic layer of the embryo. Thus the fibroids of the skin arise from musculi erectores pili; those of the œsophagus, stomach, intestinal canal and prostate from the plain muscular fibres of these organs, and those of the abdominal wall from fibres going out from the uterus through the ligaments in the direction of their embryonal attachment.

Twelve well diagnosticated connective-tissue tumors of the round ligament have been collected by Sänger (2). These represent almost every possible theoretical position in which such a neoplasm could be found, namely: in the round ligament, in the pelvis, in the canal and outside the canal, in the walls of the abdomen, or in the labia majora.

Small fibroids have been occasionally found in the broad ligament. Virchow (9) has made such an observation. The tumor was as large as a bean, and so far removed from the uterus and from the ovary that no relation of origin to them could be considered. Such tumors have been thought by many investigators to arise from a displaced fragment of the ovary, or an accessory ovary.

If any doubt remained of the possibility of the primary origin of fibroid, or better, of desmoid tumors in the broad ligament, the careful consideration of Cohnheim's post-mortem examination, reported by Freund (28), would remove it. He found on the posterior wall of the uterus and of the bladder, and between the leaves of the broad ligament, even to the outer end of it, numerous isolated myomata of all sizes, from a cherry to an apple.

Sänger (1 and 2) has collected eleven cases of primary desmoid tumors of the broad ligament which reached a considerable size. There are several observations by other authors which swell the number of observed cases to nineteen or twenty.

Then it is both possible and probable that our tumor arose originally from the broad ligament in which it was found. It is still necessary to show that it did not arise from the ovary.

(*c*) There are at least three reasons for thinking that it did not arise from the ovary, namely: the form of the tumor, the microscopical elements of the tumor, and its manner of attachment, or want of pedicle.

The fibroids of the ovary are simply hypertrophies of the connective tissue of the ovary, and therefore their contour is irregular and nodulated, and not smooth and spherical like ours.

Fibroids of the ovary are composed almost entirely of fibrous tissues, and unstriped muscle-fibre is rarely and sparingly found, while our tumor is composed almost, if not entirely, of plain muscle-fibres.

Fibroids of the ovary have been shown by Leopold (28) to be connected with the ligament by a long, simple pedicle, which does not include the tube. One tumor lay deep and sessile in the pelvis.

It is not significant that a diagnosis of an ovarian tumor was made before the operation, as this has been repeatedly done by other operators in the case of solid tumors and cysts of the ligaments.

Neither does it matter that the right ovary was not recognized, as it is frequently melted down on the surface of large cysts, and becomes almost unrecognizable through pressure atrophy.

I conclude after all these considerations that this is a true primary leiomyoma of the broad ligament.

A table is appended to this article giving a synopsis of the eleven cases collected by Sänger (1 and 2) to which I have added six other cases. Three of these are from Freund (28), one is from Bantock, and one is from an unpublished case of Fenger, and the other is the case I have just described.

In only six cases was the true position of the tumor recognized before the operation, namely, Schmid's, Miculicz's, Freund's three cases, and Fenger's.

Cystic, cavernous, and sarcomatous myomas, as well as simple myomas, are represented.

The average age of the patients is about 32 years, the extreme being 19 and 42.

It is probable that these tumors are not so rare as this limited number would indicate, but that in the advanced stage of growth in which they come to operation, the ovary becomes drawn out and lost on the wall of the tumor, which then seems to have arisen from the lost ovary. An earlier examination would perhaps have revealed their true position.

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THE TREATMENT OF NERVOUS AND MENTAL DISEASE BY SYSTEMATIZED ACTIVE EXERCISE.

BY CHARLES K. MILLS, M.D.,
OF PHILADELPHIA, PA.

(*Concluded from page 167.*)

Systematized active exercises serve a good purpose in some of the various disorders designated as asthma. One case of this kind, a young lady, despondent, weak, dyspeptic, hysterical, with feeble heart, and subject to attacks of asthmatic breathing, improved with great strides in a few weeks under general active exercises. She began treatment with half-pound dumb-bells, and at first could only stand five minutes' work. The exercises were increased, until half an hour was reached, and dumb-bells weighing four pounds were used.

In the treatment of chorea, or rather choreas, systematized active exercises are valuable. Special forms of gymnastics have been employed for this affection to some extent, particularly in France and Germany. Napoleon Laisné,[1] a French professor of gymnastics, and evidently an earnest and enthusiastic worker in his chosen field, under the directions of Dr. Blache and other physicians of Paris, has used gymnastics largely both for chorea and other convulsive disorders. In 1865 he published a book in which his methods are set forth. Both Schreiber and Dujardin-Beaumetz refer to his labors and successes. His method in mild cases, as described by Schreiber, is to place the child before him, steadying it between his knees, and then take its hands in his, and perform rhythmic movements with each arm, keeping time by counting, or, better still, singing, out loudly—"one," "two," "three," etc. The child, at the same time, is also urged to try and keep time with the movements, and not to make them irregularly.

"Care must be taken in the beginning to prevent, as much as possible, the coincidence of involuntary movements with the rhythmic ones. When the arms have been exercised, similar movements are undertaken with the legs. From time to time, a pause for rest is made, during which the limb must be held firmly enough to prevent the occurrence of involun-

[1] Applications de la Gymnastique à la guerison de quelques Maladies. Paris, 1865.

tary motions. The child is then laid on its back upon an inclined ladder, the feet being held by an assistant; then grasping a rung above its head, it holds on in that position as long as it is able. This is to be repeated several times, and to be followed by a short rest. Afterward, the shoulders, back, and legs are rubbed and gently kneaded."

Lengthy details of treatment will be found in Schreiber's Manual.

Two cases of minor chorea improved under medicinal treatment up to a certain point, and then would advance no further. General exercises with light dumb-bells were ordered, and in both cases the progress to complete recovery was rapid.

In the treatment of habit chorea, these exercises have a peculiar value. This, whether in children or adults, is an annoying and distressing disorder, and commonly intractable. By habit chorea is meant an abnormal movement or series of movements, voluntary or partially involuntary, and repeated at frequent intervals. Mitchell[2] records two interesting cases, and recommends for treatment careful and good diet, light gymnastics, no school, gentle aperients, and full doses of arsenic, particularly the hypodermic injection of arsenic in the form of Fowler's solution. I refer to this treatment, as he includes light gymnastics among the measures recommended.

Among my nervous patients I have had a goodly number of cases of habit chorea. Nearly thirteen years ago I reported the case of a girl, fifteen years old, who had peculiar movements of her right ear, after a time associated with twitchings of her nostrils and upper lip, and the limbs of the right side. Another patient, under excitement, made a movement of extension and semi-rotation with one arm, sometimes accompanying it with twitching of the facial muscles. Facial grimaces constitute, as is well known, one of the most common forms of habit chorea. I have now under my charge a case of habit chorea which is being treated successfully by systematized active exercises. The patient, a young lady eighteen years old, began to be troubled with spasmodic movements nine years ago. These lasted at first from one to two years, then disappeared for a year to return again, and have since gone and come several times. For the last two years, however, she has been troubled almost continuously with the movements, and has tried various modes of treatment, chiefly medicinal, but without any decided benefit. The chorea consists of a sudden jerking of the head downward and to one side, which may be performed once or several times in succession. Either with or without this twitch or jerk, she frequently also has a snapping movement of both eyes. The chorea was not started by imitation, but it is much influenced by any cause of nervous excitement, as fright.

Systematized gymnastics, either general or local, constitute a rational treatment for cases of this kind, because by means of such exercises not only is the general nutrition of the patient improved, but the nerve centres are given tone and strength, and good habits of movement are made to substitute bad. Such eccentric and abnormal movements are the result of eccentric functioning by nerve centres, or of irregularities in the conveyance of impulses through nerve channels. By again and again causing normal impulses to be conveyed in a normal manner to muscles, in time the choreic habit will be overcome. Such treatment, however, needs to be persisted in for months.

The advantage of any treatment which involves specific direction and the adroit calling out of the volition of a patient must be evident to everyone who has had experience with hysteria in its manifold forms. In hysterical paralysis much can be done by laying out a careful plan of treatment by exercises, and gradually leading up to their full performance. In referring later to ataxias and palsies, functional and organic, methods to this end will be considered. For the improvement of nutrition, and of what may be termed the general nervous and mental tone of hysterical patients, systematized active exercises fill an important place. Properly used and controlled, they may also prove most beneficial for cases of general nervousness, and also for neurasthenia. Whatever view may be taken of the much mooted question of neurasthenia, without doubt both respiratory and muscular power, either primary or secondary, are often deficient, and the nerve centres themselves can be strengthened and improved by exercising these two powers. Care should be taken not to force individuals suffering in this way to excessive effort at first.

Great are the advantages which result from the sojourn by sea or mountain, from the cure of camp and ship; but the improvement of health obtained by such holiday treatment is often soon lost in whole or in part by the individual going back too completely to old habits of living and working. A resort to systematized active exercises for a few minutes daily will do much toward keeping the good that has been obtained.

"A man," says Maclaren, "cannot, in a week or two, eat sufficient food to supply the demands of the appetite for a whole year, neither can he take sufficient exercise to keep his body in health throughout the four seasons in a summer's ramble. These mountain excursions or sea-side sojourns must be *in addition to*, and involving no curtailment of, the daily walk to and from business, the daily ride to and from somewhere, or the daily employment with or at something; a something which will in its doing, quicken the pulse and augment the breathing, and, if possible, bring the perspiration to the forehead."

For those forms of nervous palpitation which are dependent upon a neurasthenic condition associated or not with digestive disorder, systematized active exercises are of great value. The exercise should at first be light, but should be carefully and somewhat rapidly increased. Besides the indoor exercises, after the method of Blaikie, or with the pulley-weight apparatus, the patient should use deep breathing while walking out of doors. A case reported by Dr. Theodore Clemens[3], of Frankfort-on-the-Main, is interesting in this connection. The patient was a man forty-

[2] Lecture on Diseases of the Nervous System, Especially in Women, by S. Weir Mitchell, M.D., Philadelphia Medical Times, March 28, 1875.

[3] Medical and Surgical Reporter, October 22, 1887.

six years old, who applied for treatment on account of distress and irregularity of the heart. Clemens decided to make him do the thing he most dreaded, viz., climb up several flights of stairs. The effect was most happy. The patient's pulse, which had intermitted at every tenth or twelfth beat, wavered only twice, and but slightly, in a hundred beats after he had mounted three flights of stairs twice. He now decided to make similar efforts regularly every day, and in three months he was a well man.

For the gronp of diseases which fall to the lot of both the neurologist and orthopædist—cases of curvature, deformity, atrophy, etc.—systematized active exercises have long been used by the best authorities. I can only refer in this general way to this branch of the subject in the present paper. My more particular object is to call attention to the value of systematized respiratory exercises in setting up or straightening the feeble and stooped, who also frequently are sufferers, in some degree from nervous or mental weakness. If, at the same time, appropriate general hygiene is used, the improvement in such cases is sometimes simply wonderful. I have notes of a number of cases treated by Mr. Dodge and myself to bear witness to the truth of this statement, but time will not permit me to refer to these in detail. A gentleman, whose son had been using systematized active exercises, wrote to Mr. Dodge as follows:

"I have pleasure in assuring you that I think my son has wonderfully improved in health and appearance during the past month, while under your care. Even in two weeks we saw a marked change in him for the better—his stooping shoulders (made so by outgrowth of strength) straightening marvellously."

For gout and lithæmia, to promote excretion and nutrition; for anæmia and spanæmia, to assist assimilation and further oxidation; for headache, sleeplessness, and nervous irritability, to soothe and calm the nervous system; to aid elimination in cases of lead, arsenic, mercurial, and other metallic or toxic diseases; for diabetes, to favor the skin and increase combustion, systematized active exercises have a value which cannot be too highly extolled, and one which I have had an opportunity to demonstrate in my own practice.

In curable ataxias, as in those which follow diphtheritic or exanthematous diseases, and in the hysterical varieties, systematized active movements, the patient at first lying down or sitting, and subsequently standing, have proved of great service in my hands.

In Dr. Mitchell's lectures,[1] some valuable advice and interesting details are given with reference to the best method of slowly training by what are really systematized active movements, although not so called by him. The weak and inapt muscles are cautiously brought into use. The patient is first convinced, after she has made an effort which seems extreme, that another forth-putting of will must add to the previous results. The nurse begins to train the patient while in bed, to move the legs one at a time very slowly, but in larger and larger movements, with intervals between of a minute or more.

"An order is given to lift the leg; if it be too weak, a finger beneath the ankle aids it, but no attempt must be let to fail utterly; as she gets on the orders are to be obeyed more quickly. It is easy to sketch out for one's self what such a system should be in its details. After it has gone far enough the patient is seated in bed with some support to her spine, and is trained to move the head freely. The next step used with me to be a lesson in walking, but of late I find it better to teach the girl to creep, which is an easy and natural mode of training for the walk. The patient has pads tied over her knees, and, lying flat on her face on the floor, without skirts, has around her a folded sheet. At an order she tries to rise, helped by a lift of the sheet-belt by the nurse. When she is able to do this, and gather her legs and arms so as to make herself a quadruped, she is taught to balance herself, every effort being assisted, when needing help, by the nurse standing above her. The progress to creeping is easy; then comes the lesson of kneeling and pushing a chair; and last, that of standing in a corner or by a chair.

In the treatment of ataxic affections, even sometimes when dependent upon organic disease of the cerebro-spinal axis, the use of what may be called balancing or acrobatic gymnastics is of some value. Dr. Mortimer Granville, in the *Practitioner* for 1881, and subsequently in his monograph on "Nerve Vibration and Excitation," discusses a method for the regeneration of the nerve elements by exercise on the basis of the law of development through function, holding that the ataxic subject is reduced by dissolution to the position of a child just learning to stand or walk. His plan is to direct the patient to stand with his eyes closed in his bath, after pouring a small can of water down his spine, or applying a mustard poultice over the full length of the spine for ten minutes or a quarter of an hour, to persevere in an attempt to stand for, at first, a quarter of an hour, and, as his state improves, for half an hour every morning. He is to be furnished with a chair or rail at hand, to which he can cling in case of need, but is instructed to avoid using it except when in danger of falling. The exercise must be continued diligently for weeks before success can be obtained.

In patients suffering from multiple neuritis, or some curable forms of myelitis, advantage should be taken of the first signs of motor improvement to begin with active exercises, while the use of electricity and massage is continued. The particular point upon which I desire to insist is, that the attempt to join the will of the patient to the long unused muscles shall not be deferred a moment longer than is necessary. Simple attention to this truth, which ought to be self evident, would, I think, in many cases have saved patients from weeks or months of nselessness.

In the treatment of various forms of paralysis that systematized active movements may be employed with advantage has long been known. Even in paralysis from organic brain disease, a clear

[1] Op. cit.

method of using gymnastic treatment will be found to serve an excellent purpose. Such paralysis is usually the result of hemorrhage, embolism, thrombosis, tumor, abscess, or depressed fracture; less frequently of meningitis or cerebritis, of atrophy or arrested development, and still more rarely of uræmia. Sometimes in cases of sudden lesion, as hemorrhage or embolism, the assault upon the nervous system is so violent, or the destruction is so great that death results quickly, or the patient is reduced to a state of utter helplessness, for which, practically, nothing can be done. In many cases, however, soon after the attack, or even at a later period, the amount of palsy is disproportionate to the cerebral lesion by which it has been initiated. Many cases of monoplegia and hemiplegia illustrates this truth. Little by little some of these patients regain muscular power to such an extent as almost to induce the belief that they will get entirely well; indeed, in some cases of hæmorrhage, tumor, traumatism, syphilitic meningitis, and uræmia, complete or almost complete recovery does occur. We should, therefore not disregard entirely the treatment of such patients.

The course of treatment usually pursued in these cases, in the main wise, is, at first, to do little more than protect the patient from disturbing influences; and after the shock of the attack, and the acute inflammation which sometimes accompanies or follows it, have subsided—that is in a few weeks or months—to give absorbents and alteratives, and to apply electricity, and possibly massage, allowing the patient to use the affected limb as he sees fit. More than this, however, should be done; and it is just here that single active exercises, after some thorough system, may play a useful part. Every effort consistent with safety, should be made to unite again the paralyzed limb with the volitional centres. Such patients often need to be incited to effort.

Two methods of systematized active exercises may be tried for these hemiplegias and monoplegias. One is the method partly of duplicated active, and partly of single active movements, used and described by some of the writers on Swedish movements; as, for instance, by the Taylors. The patient is placed in a recumbent or half-reclining posture, so that he may be able to direct all the cerebral energy at his command toward the paralyzed member, and is then urged to make some simple movement. If he succeeds to ever so slight a degree, he should simply be encouraged to repeat the movement, but he should be carefully guarded against undue or too long prolonged effort. Other simple movements are added from time to time. If he can do absolutely nothing, the operator should perform on the patient the desired movement, while the latter fixes his attention upon the performance and tries to assist. When a little headway has been made, systematized active movements should be used in conjunction with electricity, massage, and duplicated active movements in an orderly and thoroughly regulated manner. With light dumb-bells and with the pulley-weight apparatus, all possible movements, and particularly those which are most wanting, should be cautiously encouraged. From a cautious pursuance of such methods I have seen a surprising result in a number of cases supposed to have reached the limit of improvement.

Such treatment does good, not only because the original lesion may have been partially removed, but also because, by such efforts portions of the brain adjoining the centres destroyed may be made to take on new function; or possibly in some instances, the other hemisphere of the brain may be called into new activity. To central spinal palsies, as well as to paralysis from brain disease, in a large measure the same truths apply.

Another method of gymnastic treatment which I have often employed with benefit in cases of monoplegia and hemiplegia, is to cause the patient, first, to make a movement upon the unaffected side, and then instantly to perform the same movement with the paralyzed member, following this quickly with an attempt to do the same thing with both limbs. It is surprising the curious results that will be sometimes obtained in this way, if the leg is but little affected, and the patient can stand while these movements are performed by the upper extremities. To exercise the legs, the patient, of course, should be placed in an easy position, and one that will allow the movements to be performed with the greatest convenience. Exercises of this kind probably have some effect in bringing the paralysed side of the body under control of the uninjured side of the brain through commissural channels in the spinal cord.

For some of the arthritic neuroses, and for rheumatic neuritis, or muscular rheumatism, these exercises are of undoubted value. I have seen three cases of a form of rheumatic neuritis affecting the deltoid and adjoining muscles, in which the progress to complete recovery was much assisted by an early resort to dumb-bell exercises and pulley-weights. Cases of this kind are best treated by using large doses of oil of gaultheria, or sodium salicylate, with hypodermic injections of morphia in the most acute stage; a little later resorting to massage, electricity, or both; and then to exercise with light dumb-bells or pulley-weights. Here, again, the point I wish to impress is, that such active exercises should not be deferred too long.

Hysterical aphonia or apsythria (loss of the power of whispering) can sometimes be treated successfully by a species of respiratory gymnastics, or a combination of respiratory with vocal and muscular gymnastics. Dr. Mitchell has described a method of bringing back the voice, which is really a form of respiratory gymnastics, a method which I have used several times with success, and less frequently with failure. Speaking of a woman who had good power over the laryngeal muscles, but could neither speak nor whisper, he concluded that if he could teach her to speak only with a very full chest, he might secure an involuntary success. Asking her to fill her lungs several times, and when very full to keep her mouth wide open, he then had her try to sound the broad A, at the same time breathing out violently. She made a clear, audible sound, and was at once on the

high road to cure. Some years ago, with this simple method, I obtained a brilliant success with a young lady who had not spoken even in a whisper for many months. I now combine light dumb-bell and pulley-weight chest exercises with this method.

In certain cases the treatment by rest, seclusion, etc., can be successfully combined with that by systematized exercises. After the nervous or broken-down patients suitable for the treatment have progressed to a certain point; after their nutrition has been placed upon a firm basis, respiratory exercises without apparatus, or with very light dumb-bells, can be carefully begun. Five minutes, or perhaps only three minutes, should be taken at first, and the time should be increased with the utmost caution. In a recent neurasthenic case with hystero-epileptic seizures, after the patient had improved under the rest treatment, systematized active exercises were resorted to with the greatest benefit. In those cases of hystero-epilepsy in which the seizures are partially voluntary, or of the induced voluntary kind, the use of such exercises assist the patient in obtaining the control of herself, and the movements which enables her to resist the beginning of the attacks.

Dr. C. F. Taylor, in the book to which I have already referred, has hit the secret of the combination of rest and exercise in certain cases.

"The true remedy," he says, "is rest and exercise. Let the rest be complete relaxation of all muscular effort—not the entertaining of company, sitting bolt upright, so that the spinal muscles must be constantly acting, or reclining in a 'graceful' attitude on a lounge, with book in hand, but a completely sustained position, when all the muscles must cease to act. Then the exercises to follow should be short, varied, and taken with some vigor."

The now generally accepted views with reference to cerebral localization throw some light upon the manner in which systematized active exercises, or other forms of gymnastic treatment, improve or repair the nervous system, and especially the brain. This fact has not been overlooked by authorities in neurology and gymnastics, as by Emil Du Bois-Reymond, Schreiber, Crichton-Brown, and others. In the brain are represented both a differentiation and an integration or solidarity of function. Centres for speech, for vocalization, for particular movements, for the special senses, for the muscular sense for organic sensations, for some of the higher faculties, as of attention and inhibition, are now, with reason, claimed to have been isolated. For the localization of some of these, as of speech, motor, and some of the sensory centres, the facts and arguments are practically incontrovertible. In the plainest of terms, if brain centres which determine certain movements exist, the performance of these movements must develop and train not only the muscles concerned in these actions, but the cerebral centres with which they are connected.

DR. AUVARD has been made Editor of the *Archives de Tocologie*, the well-known obstetrical and gynecological journal, published by Delahaye and Lecrosnier, of Paris.

ICHTHYOL IN SURGERY.

Read before the Philadelphia County Medical Society, January 25, 1888.

BY EDWARD MARTIN, M.D.,
OF PHILADELPHIA.

Ichthyol was first described by Schrötter, and used in the treatment of skin diseases by Unna. It is obtained as a clear yellow-brown oil by distilling a certain bituminous matter found in Tyrol, and containing the fossilized remains of fishes and marine animals. By the action of sulphuric acid on this distillate, and subsequent neutralization with soda or ammonia, either the sodium or ammonium sulphichthyolate is produced. The latter compound is preferred by Unna.

The ammonium sulphichthyolate is reddish-brown, clear, syrup-like liquid of burning taste and odor, soluble in water, making a clear, red-brown solution; also soluble in equal parts of alcohol and ether.

The ichthyol preparations are characterized chemically by their richness in sulphur (10 per cent.), so intimately united that it can only be extracted by complete decomposition (Lartigeau); they easily take up oxygen, acting as powerful reducing agents (Baumann).

Clinically, the ichthyolates are described by Unna as being powerful antiphlogistics, causing anæmia and rapid subsidence of swelling in all tissues. This antiphlogistic effect is ascribed to the drug's action on the endothelium of the bloodvessels depriving it of oxygen in virtue of its reducing properties, and contracting the lumen of the vessels. This explanation is not, perhaps, entirely satisfactory, but physiological studies have not yet given us a better one. The cornifying effect of the drug on the epithelium of the rete is undoubted.

Surgically, what are the indications of the drug? Lartigeau states that it is indicated in all subcutaneous and inflammatory tumefactions, œdemas, vascular dilatations, incipient furuncles, and local manifestations of rheumatism.

Elliot praises it highly in burns of the first and second degree (5 per cent. solutions in water) as producing rapid subsidence of pain and inflammatory symptoms. He finds its application to obstinate varicose ulcers associated with eczema rubrum (sodium compounds, 3 to 5 per cent.) at times productive of marvellous results. In his hands it is also useful in cicatrices, and in a few cases of rheumatism and neuralgia has given immediate and marked relief from pain.

Schweninger states that in rheumatism, lumbago, ischias, tic, gout, and migraine, local applications of ichthyol act more powerfully in allaying the pain than any known medication.

Lorenz is astonished at the fabulous efficacy of the drug. In acute and chronic joint rheumatism, acute muscular rheumatism, mastitis, panaritis, and contusions, a few rubbings with pure or 50 per cent. ichthyol compounds are peculiarly successful in allaying pain and hastening healing. In chronic and acute joint rheumatism relief often follows a single rubbing, while this is the rule in acute muscular rheumatism.

The pain of gout disappears, the shining red skin becoming quickly wrinkled. A beginning mastitis or panaritis is always aborted, or if fully developed the pain is much relieved. Its prompt use prevents the discoloration following contusions. It immediately allays the pain of a burn, and prevents blistering. Finally, a 10 per cent. solution hastens the cicatrization of badly healing ulcers.

Loring dilutes with water when the pure ichthyol compound cannot be borne and prevents irritation of the skin by careful washing and drying before each application.

Von Nussbaum states that a single application of ichthyol 1 part, water 4 parts, lanolin 5 parts, has allayed the itching of eczematous ulcers which had resisted all known applications for weeks and months, and promptly brought about rapid cicatrization on being continued a few days. Arthritic pains, which for weeks have made day and night miserable, are relieved at times in one-half minute after the application of a strong ichthyol ointment. In erysipelas it produces results obtainable by no other means, namely, the immediate arrest of the disease. Von Nussbaum's treatment was first the thorough disinfection and drainage of the wound, then, if the disease continued to extend, over its whole surface a thick layer of ichthyolate and vaseline, equal parts, was spread and covered by a layer of 10 per cent. salicylated cotton. The erysipelas advanced not a line further and in a single day the swelling disappeared and the red, shining, puffy surface became yellow, brown, and wrinkled. This remarkable effect von Nussbaum ascribes not to the influence of the drug as Fehleisen's cocci, but rather to a change produced in the tissues by virtue of which they cease to favor the growth of the microörganisms.

Stelwagen has had excellent results in the abortion of furuncles by ichthyol preparations.

Agnew (D. Hayes) considers the ichthyol preparations more powerful than any known therapeutical agent in bringing about reduction of inflammatory enlargements, and has had particularly good results in recently enlarged lymphatics. He uses sulphichthyolate of ammonia and iodide of lead, equal parts, applied generously and covered in by oiled silk.

The writer has used ichthyol in—

1. Six cases of cervical adenitis, with absolutely no relief; cure being subsequently brought about by iodine or the knife.

2. Fifteen cases of marked inflammatory induration of the subcutaneous tissue, with invariably a speedy and in some cases almost a magical reduction, and this after other means had been tried unsuccessfully.

3. In two cases of furuncles without good effect.

4. In one case of cellulitis without marked effect till the knife was used (in this case staphylococci were found but no chains).

5. In four cases where pain was the most marked feature of inflammation, with complete relief in three and no effect in the fourth.

6. In one case of erysipelas of the scalp, with immediate cure.

The latter is so striking that it is reported in full:

B. C., bartender, æt. 36; full-blooded Irishman. Struck on the head by a bottle whilst intoxicated, December 20, 1887. Two slight wounds of the scalp, to which no dressing was applied. 22d. Chill, fever, nausea, great pain in the head, and swelling. Went to a clinic; wounds were opened, disinfected, and catgut drainings provided; symptoms progressive. He was seen by the writer on the second day of his fever, the fourth from the infliction of the wound. No sleep for two nights. Pulse 106; temp. 103°. Violent headache; whole scalp puffy, œdematous, and very tender; a few drops of thin pus squeezed from wounds. Cover-glass preparations of blood from puncture by tenotome showed Fehleisen's chains. A saline purge and iron were ordered internally. On the scalp was placed a thick layer of ammonium ichthylolate and vaseline, equal parts. The pain was relieved almost immediately; the patient slept comfortably; his temperature the following morning was 98°, and he was and remained well.

This is not different from the results obtained by Nussbaum.

With the exception of the case of erysipelas, the writer used a 10 per cent ointment of ammonium ichthyolate in lanolin, fearing lest, in the case of stronger applications, his effects might be ascribed to counter-irritation. It is possible that stronger preparations would have proven efficacious in the treatment of adenitis in which the weak ointment failed.

The extravagant praises bestowed by some authors on ichthyol savor more of proprietary advertisements than scientific contributions, and the variety of affections for which it is recommended might well make one doubtful as to its complete efficacy in any single instance.

An analysis of the cases in which it has proven serviceable will show, however, that they can be relegated to one of two classes:

1. Affections characterized by inflammatory enlargement.

2. Affections characterized by pain of peripheral origin, probably depending on inflammation or congestion.

For either of these conditions, theoretically, a powerful antiphlogistic would be indicated, so that the clinical indications for the use of the drug correspond to its alleged therapeutic effect.

When the surface is irritated, weak solutions (3 to 5 per cent.) should be used; but when the skin is intact and the subcutaneous tissues are to be affected, pure or one-half strength ointments give the best results. In using strong preparations the skin should be washed with warm water and soap, and thoroughly dried before each application. Ichthyolates can be combined with any of the ointments, or can be dissolved in water.

The writer's success with the drug, even where it was not used in the most efficient manner, has convinced him that the praise bestowed on it by the Germans is well merited. Where suppuration has actually taken place the weak ointment is not of service, but in the allaying of inflammatory pain and the resolution of subcutaneous induration (excepting adenitis) the results are most satisfactory.

SOME INTERESTING SEQUELÆ OF A CASE OF SCARLET FEVER.

Read before the Philadelphia County Medical Society, on January 25, 1888.

BY A. J. DOWNES, M.D.,
OF PHILADELPHIA, PA.

On November 15, 1887, at 3 P.M., I was asked to see B. M., a boy of 7 years, then under the care of a homœopath, and said to be dying of heart disease. I called immediately. The boy was comatose, had been so for twelve hours. The face had a characteristic pallor, the eye-lids were slightly puffy, the pupils dilated, the breathing stertorous.

I listened to the heart and heard a loud systolic apex murmur, a diastolic one at the right base, and mingling with both a peculiar whistling sound, the cause of which at the time I did not understand. Examining further, I found that the eyelids had become puffy two days previous, that the feet and ankles were now swollen, and the scrotum slightly so. No urine had passed in twenty-four hours. Excepting a few scybala, forty-eight hours before, the bowels had not moved in seventy-two hours.

The child had scarlet fever five years before. I told the father that the boy did have heart disease, but that he was dying of uræmia. Shortly after 5 P.M. the boy was dead. The following morning Dr. Martin Rively and myself made a post-mortem examination. The specimens I show are the heart, kidneys and a piece of the liver.

So advanced cardiac lesions in a child of this age are far from common. The ventricles are both hypertrophied and the cavities dilated, the right considerably. The curtains of the mitral valve are thickened and fibrous, the posterior leaflet is exceedingly contracted and shows above it a recent inflammatory area. The aortic curtains are a beautiful picture of an insufficient valve. The whistling sound I heard during life must have come from the tricuspid valve. The hypertrophy of the muscular elements of the ventricle, with the marked distention to which the cavity was subjected, surely allowed sufficient leakage to cause this sound.

On account of its so late recognition and its undoubted influence in enhancing the cardiac condition the state of the kidneys is exceedingly interesting. Even microscopically the kidneys show changes which must have been going on for some time. The pale cortex and the eversion of the cut edges indicate fat. Under the microscope we find evidence of long existing changes, sufficient to warrant the assumption that in the long-ago attack of scarlet fever the kidney changes began. The tubules are swollen, distorted, and full of casts. The epithelial cells lining them are somewhat granular and smaller than normal with their nuclei becoming indistinct. Long existing changes therefore. We find also recent conditions.

The glomerules are swollen and congested and in their vicinity an infiltration of small indifferent cells. A very characteristic glomerulo-nephritis of recent date. The cause in this case of anuria and consequent uræmia. And the history points to this: for the boy, although not well for a few years back, was comparatively so. For two weeks previous to his death he was confined to his bed, and undoubtedly during this time he was suffering from a glomerulo-nephritis which, adding itself to an already damaged kidney, precipitated an attack of uræmia.

Additional proof that the boy's kidneys were not normal prior to his last sickness is not wanting. His bladder, post-mortem, contained about two ounces —twenty-four hours' urine—of this I collected one ounce. It contained a large amount of albumen but no sugar, round and columnar epithelial cells showing fatty degeneration, a few epithelial casts containing oil globules and some free oil. A few weeks nephritis could not cause this urine.

The liver changes are secondary to the heart condition. Under this microscope it shows both fatty infiltration and degeneration.

In concluding, I would recall the points that interested me in the case. *First.* The extensive cardiac lesions caused by scarlet fever, occurring in a child under 2 years. *Second.* The late recognition of the heart, the non-recognition of the kidney condition. *Third.* The occurrence of acute inflammation—the glomerulo-nephritis almost typical of scarlet fever—in an already damaged kidney. *Finally.* May I not call attention to this case as showing to what extent the sequelæ of scarlet fever may advance when not recognized and treated. And the history of the case proves such to be the fact. Eight homœopaths in succession had charge of the boy for four years prior to his death. Over a year ago one had diagnosticated diabetes. The one in attendance before my visits had recognized valvular affection. But the kidney lesions had escaped them all. Apparently this proves that the case ran an almost natural course.

ABSCESS OF THE CEREBELLUM CAUSED BY DISEASE OF THE EAR.

BY THOMAS C. SMITH, M.D.,
OF WASHINGTON, D. C.

Disease of the brain caused by the neglect of middle-ear affections, is by no means uncommon, and the case to be reported is another instance of the fallacy of supposing that a chronic otorrhœa is best treated by being let alone.

On August 29, 1887, I was asked to see M. W., colored, æt. 15 years. When an infant she had an attack of measles, following which came a discharge from the ear and almost complete loss of hearing. She was always sick. Headache was a frequent affair, and at the time of my visit she was experiencing an unusually severe attack. There was some fever; constipation; loss of appetite; rather slow pulse. Bromide of potassium was given for the headache, and the bowels were moved by suitable means. At my next visit I learned that the girl had had convulsions after my visit, and had passed a sleepless night. I now examined the ears and found the left meatus filled with pus. Her mother informed me that she had suffered from the ear disease, with dis-

charge, ever since the attack of measles, as already mentioned. At times the discharge of pus would cease for a while but her symptoms did not seem to be modified thereby. She did not think anything could be done for the ear disease, consequently, nothing had been done. The mother was given to understand that the headache and convulsions were due to the ear disease and an unfavorable prognosis was given. The ear was syringed and an astringent used to try to influence the diseased middle-ear tissues. Chloral at night secured sleep, and after a week my visits were discontinued. On September 14, the girl came to my office with her mother, and the ear was examined. The purulent discharge was not quite so free, but the meatus was so much obstructed by granulation-tissue that it was impossible to get a view of the deep portion of that tube. The general condition of the girl was so bad that I did not think any treatment would avail much. Still, she was ordered tonics and good nourishment, and the ear was to be cleansed with astringent and antiseptic remedies. I did not see her again until the 12th of the present month. She was in bed suffering from headache. On the 14th she was easier, but she was disposed to be drowsy. On the 15th coma existed and she died about the middle of the day. The diagnosis of intracranial abscess had been made. No paralytic symptoms existed at any time.

The case is interesting from a surgical point of view. Brain surgery is making such great advances, that the time may come when all intracranial abscesses and tumors will be subjected to the same treatment as when they occur in other locations. In view of the fact that the existence of abscess was so clearly established in this case, the question arises, Why was not the skull trephined and the abscess sought out and opened? In the light of the symptoms presented, I answer the question by asking another. Where would the surgeon have applied his trephine? And with the post-mortem evidence before us, I ask whether an operation would have been beneficial even supposing the abscess to have been correctly located before the patient was *in extremis?*

The autopsy was made by Dr. Lamb, and I append his notes:

"*Necroscopy.*—Head alone examined. Left meatus auditorious externus occupied by thick, purulent matter of dark, rather bloody hue. Dura mater normal, except on posterior surface of petrous portion of left temporal bone, where the adhesion was a little greater than normal around an opening in the bone; this opening was one-quarter of an inch in diameter and communicated with the tympanic cavity; this cavity, again, was enlarged by progressive excavation of the bone, into a chamber an inch in length, and of corresponding breadth and height. Cerebrum normal. Left hemisphere of cerebellum, anterior half converted into an abscess."

KASCHAN HOSPITAL.—A few years ago three Russian female physicians founded a hospital at Kaschan, Persia, for Mussulman women. The experiment has met with great success, and in the last twelve months 15,000 patients have been treated.

MEDICAL PROGRESS.

THE TELEPHONIC BULLET-PROBE.—At the meeting of the Surgical Section of the New York Academy of Medicine on January 9, DR. J. H. GIRDNER read a paper on this subject. In the past year he has perfected the instrument that he described a year ago, and now operates it by a current of electricity extracted from the body of the patient himself. This instrument, as now arranged, leaves both hands of the operator free, and shuts out all sound except that heard when the bullet is touched. Dr. Girdner reports the following case:

A musket-ball had lain between the tibia and fibula for twenty-two years. A long, narrow, tortuous sinus had been discharging for a year. When an ordinary probe was passed, hard substances could be felt in many places; but you could not tell if bone or bullet was being probed. The porcelain-probe could not have been marked by the lead owing to thick crusts of salts of lead with which the ball was covered, even if it could have been brought into contact with the bullet, which it could not, owing to narrow places in the sinus. Bone and other tissue were felt as the probe passed to different parts of the wound, but no response was heard in the telephone until the leaden bullet was touched, then an electric current passed through the telephone; and as often as this current was made and broken, by touching and removing the probe from the lead, so often was there a vibration of the diaphragm, and consequently a clicking and scraping sound heard in the telephone; in other words, the patient's body was converted into an electric battery; the body corresponded to the cups, its fluids and heat to the battery fluid, the steel bulb immersed in the mouth to the zinc, let us say, and the lead when it was touched, to the carbon, and thus our battery was completed, a current obtained, and the metal diaphragm made to vibrate.

The advantages of this instrument over all others at once appear, when it is remembered, that in its use the accurate sense of hearing is substituted for that of the sensation communicated to the hand, which is always unreliable, for no one can tell if a hard substance felt in a wound be bone, metal, or some other hard tissue. The porcelain-tipped probe was made with the hope of overcoming this difficulty; but after ample experience with the Nélaton probe, both in my own hands and in those of others in my presence, I am certain that, unless the bullet is perfectly clean from grease, lead salts, etc., and very favorably situated, it is not possible to obtain lead markings on the porcelain tip which can be relied upon to direct our operative procedure. Let any one hold a bullet in the hand, and probe it with a Nélaton probe until the markings of the lead on the porcelain point are perfectly distinct, and he will find that it requires an amount of force and pressure in rubbing the lead which he will rarely be able to make, even in the most favorable cases of gunshot-wound. None of the above conditions, which make the Nélaton probe useless, in any way interfere with the perfect working of this new probe, for the slightest touch of the bullet

with the probe causes a loud and unmistakable sound in the telephone. Another great advantage is, that a sharp, slender, steel needle may take the place of the blunt probe, and then no tract is necessary in probing; the needle, rendered aseptic, may be thrust into the tissues like a hypodermic needle, with little pain, and no danger to the patient, as has been verified in actual practice, and when the bullet is struck, you have only to loosen the clamp-screw and remove the handle, allowing the needle to remain fast in the tissues, with its point still in contact with the missile, and it serves as a perfect guide in cutting down on the bullet.—*Medical Record*, Feb. 4, 1888.

SALT IN MILK FOR CHILDREN.—DR. JACOBI says that the physiological effect of chloride of sodium is very important, no matter whether it is directly introduced through the mother's milk, or added as a condiment to cow's milk, or vegetable diet. Both of the latter contain more potassium than sodium, and neither ought ever to be given, to the well or sick, without the addition of table salt. A portion of that which is introduced may be absorbed in solution; another part is, however, broken up into another sodium salt and hydrochloric acid. Thus it serves directly as an excitant to the secretion of the glands and facilitates digestion. Therefore during diseases in which the secretion of gastric juice is interfered with, or in the beginning of convalescence, when both the secreting faculties and the muscular power of the stomach are wanting, and the necessity of resorting to nitrogenous food is apparent, an ample supply of salt ought to be furnished. The excess of acid which may get into the intestinal canal unites with the sodium of the bile in the duodenum, and assists in producing a second combination of chloride of sodium, which again is dissolved in the intestines and absorbed. Its action in the circulation is well understood: it enhances the vital processes, mainly by accelerating tissue-changes through the elimination of more urea and carbonic acid.

A very important fact is also this; that the addition of chloride of sodium prevents the solid coagulation of milk by either rennet or gastric-juice. The cow's milk ought never to be given without table salt, and the latter ought to be added to women's milk when it behaves like cow's milk in regard to solid curdling and consequent indigestibility.

Habitual constipation of children is also influenced beneficially, for two reasons: not only is the food made more digestible, but the secretions of the alimentary canal, both serous and glandular, are made more effective by its presence.—*Archives of Pediatrics*, January, 1888.

TRIBROMPHENOL, AN ANTISEPTIC.—GRINEM reports his experience with this substance as follows: It is a combination of bromine with phenol, and is a white crystalline powder, very insoluble in water, easily soluble in alcohol, ether, chloroform, and other similar liquids. It is dissolved but little by glycerine, carbolized solutions, and dilute spirits of wine. It is dissolved by the intestinal secretions, combines with sulphuric acid, and appears in the urine as a sulphuric compound. It is not escharotic, but powerfully stimulant to granulations; it does not attack the unbroken skin.

It was used in gauze dipped in 2½ per cent. solution, with good results, in tamponing wounds and cavities; it is well adapted as a stimulating tampon for abscess cavities, but should not be used in the pharynx, mouth, or nares.

In experiments upon bacterial cultures a 1 per cent. solution sterilized septic matter in thirty minutes; in 3 to 1000 solution it sterilized gelatine cultures. A small quantity added to urine prevented decomposition. The writer gave this substance in three doses of 1½ grains each, to a patient suffering from tænia, with good results; the whole was given within an hour and a half. Personally, he took as much as 15 grains in twenty-four hours; the only effect being a slightly uncomfortable feeling in the abdomen, and an unpleasant taste.

The use of this substance seems indicated to stimulate granulations; and, by virtue of its insolubility in acids and its solution in alkalies, as an intestinal antiseptic.—*Deutsche medicinische Wochenschrift*, Dec. 29, 1887.

SULPHIDE OF CARBON IN ELEPHANTIASIS.—DR. P. D. ANTHONISZ, of Ceylon, gives the results of the use of sulphide of carbon in elephantiasis, both acute and chronic, as tried by himself and a few of his medical friends. In some of the acute cases, the reduction of swelling was prompt and complete, in others it was gradual but satisfactory. In one, a case of thirty years' standing, a year's treatment, begun when the legs were as large as the man's waist, left them about the size of his thighs. The dose mentioned in the latter was two 2-grain pills per diem, to be continued for a lengthened period, except when the drug irritates the stomach, as it will do from time to time. When the ill effects have passed, the medicine should be renewed. The writer adopts the theory proposed by Dr. Manson, of Amoy, some years ago, that the disease is due to the presence, in the blood, of the *filaria sanguinis hominis*. He believes that the remedy is efficient by reason of its sulphur ingredient and its power to prevent the parasite from multiplying in the body; which, according to Dr. Manson, it does with amazing rapidity. It will be remembered, that in accounting for the presence of the filaria in the blood, the theory of Dr. Manson included the novel proposition that the mosquito might carry in the parasite with his proboscis, and deposit it in tissues whence access to the blood could readily be obtained.—*British Medical Journal*, Dec. 24, 1887.

GALVANIZATION OF THE THYROID IN EPILEPSY.—SIGHICELLI, having noticed that thyroidectomy produced convulsions of an epileptiform nature in animals, has used galvanism of the thyroid in the treatment of epilepsy. Of 7 cases that he reports, in 2 there was an evident diminution of the epileptic access. A third case was completely cured; that is, the cure has lasted for several months.—*L'Électrothérapie*, January, 1888.

THE
Journal of the American Medical Association.
PUBLISHED WEEKLY.

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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XERODERMA PIGMENTOSUM.

At the first meeting of the New York Academy of Medicine in February, DR. R. W. TAYLOR read a paper on this subject, on which he is the recognized authority in this country. The paper was based on the results of his observation and study for fifteen years, and was devoted more particularly to a consideration of the malignant neoplasms to the formation of which the disease tends in its early stages. They that are familiar with the literature of this subject know that the disease is peculiar to childhood, that it is multiform in its clinical characteristics, and indelible in its disfigurements, and that it was first described by Hebra and Kaposi in 1870. According to Dr. Taylor there are now 39 cases on record. The first cases reported in this country were the 7 reported by Dr. Taylor in 1877, and further described in 1878 (Vid. *Trans. American Dermatological Association*). Three of the cases occurred in one family, and two in another family closely related to the first. With one exception all the cases were in girls. The boy that had the disease was attacked with mumps when about 7 years old. Resulting from this attack was an abscess that had to be opened; the wound thus made never healed, but extensive ulceration followed, which finally involved the coats of an artery, and thus caused uncontrollable hæmorrhage, from which the boy died. Another child died of marasmus, and a third was accidentally drowned.

In the 7 cases reported by Dr. Taylor all the clinical features of the disease were portrayed. The affection consists essentially of telangiectasis, pigmentations and atrophic changes, to which are superadded certain polymorphous neoplasms that are primarily benign, but that are likely to degenerate into malignant tumors. The disease seems to be one of early childhood, and in most of Dr. Taylor's cases it began at about the age of 7 months; in one case only did it begin so late as the 14th month. Of the characteristics of the disease the prodromal erythema is to be emphasized; its usual seat is on the face, under the eyes, it may be easily mistaken for sun-burn. This hyperæmia lasts from one to three months, and as it gradually disappears the pigment spots begin to appear. These affect the face and exposed parts of the neck and extremities, after extending as low as the third rib on the chest, and up to the elbows on the arms. Their size varies from that of a pin-head to a lentil, resembling ordinary freckles, and not elevated much above the surface. Among these are the red or telangiectasic spots, in which capillary vessels can be seen with a strong glass. The prodromal erythema is not so marked on the hands as on the face, there are no marked local or subjective symptoms, such as burning or itching, and the general health remains good. The lesions are always characterized by alternating exacerbations and periods of inactivity, so that the course of the disease is more or less erratic.

The period of the pigment-spots and telangiectases is chiefly that of early childhood, and these two orders of lesions are peculiar to the stage of hypertrophy. The atrophic changes usually appear at the end of the first year. The atrophy is not symmetrical, as a rule, and varies greatly in extent and intensity in different subjects; while it is not commonly so well-marked on the extremities as on the face. This atrophy of the skin develops in accordance with the atrophy of the blood-vessels of the telangiectasic spots. It is especially apt to affect the eyes, nose and mouth; causing ectopion, with its attendant evils, and deformity of the nasal and oral cavities. Very often hypertrophic changes are taking place at the same time as the atrophic. The face presents a mottled appearance and, in addition to the freckles and red spots, there are white patches varying from .625 cm. to 2.5 cm in diameter. The skin is inelastic and like parchment, or seems as if it is coated with inflexible collodion. The appearance not infrequently resembles the cicatrix of an extensive but superficial burn. There is an almost total absence of the normal secretions, and the countenance often has a peculiar immobility of expression. In some cases, however, the atrophy is much less marked than in others, and it is always less prominent upon the hands than on the face. This atrophic condition, in

general, is not unlike that met with in senile atrophy of the skin.

While the atrophic changes are to be dreaded, on account of their liability to result in hideous deformity, the keratosic or warty patches that eventually grow from some of the pigment-spots are liable to degenerate into malignant growths. In 3 of Dr. Taylor's 7 cases epitheliomata were found, and the statistics of all the cases recorded seem to show that in this disease the greatest malignity is exhibited under the age of 10 years; nearly as great between the ages of 10, and 20 and after that there is a diminished tendency to malignity. It is certainly a singular fact that epithelioma should develop in such young subjects.

In regard to treatment, Dr. Taylor says that intelligent medication, extending over several years, has hitherto always proved quite ineffectual, and no case of the disease has ever been cured. In the treatment measures should be taken to keep the skin at rest and free from all sources of irritation, and all pigmentation warts should be removed as soon as possible with the spoon. All larger tumors should also be extirpated, and the subjacent tissues thoroughly scraped, if necessary to the bone or periosteum.

According to some authorities most, and to Cohnheim, all malignant tumors, occurring at any time of life, are the result of embryonic cells not undergoing their accustomed changes, and remaining behind in normally developed tissue; and if this view be accepted, it will sufficiently explain the appearance of these malignant growths in early childhood, as was remarked by Dr. Jacobi. Furthermore, the fact that the blood-vessels are largely increased is no doubt the result of the embryonic tissue remaining; and these blood-vessels are not in a normal condition. Dr. Jacobi thinks it probable that the occurrence of spontaneous thrombosis may explain the disappearance of the red spots and other phenomena in the disease. It seems, then, as if there is an arrest of the metamorphosis of embryonic tissue, and if this be the case, Dr. Jacobi suggests that in the treatment it may do good to increase the quantity of normal connective tissue, if possible, and thus fortify the parts against the further development of abnormal growths. For this purpose, provided the supposition be correct, there are two remedies that suggest themselves as being specially indicated: first, arsenic; and second—and better still—phosphorus. By the irritation excited by suitable doses of these agents it seems possible to cause a good solid, normal nutrition in the connective tissues. Phosphorus favorably influences the normal growth of bone, and for some years Dr. Jacobi has used it with satisfactory results in caries and other bone diseases, finding it of special service in cranial rachitis. The phosphates and other compounds are of no value; phosphorus itself must be used. It may be given in oil or emulsion, in doses of .01 grain twice a day, and it must be used for a long time.

Dr. Jacobi's suggestions are valuable and practical, and it would be well if some one were to institute a systematic course of medicinal treatment in accordance with them in future cases. At the same time, surgical measures are of decided benefit in controlling some of the more serious results of the disease; and, contrary to what might perhaps be expected, as a rule the tissues heal well after the removal of the new growths.

THE NEXT MEETING OF THE ASSOCIATION.

This year will witness a change in the programme of the general meetings that has been necessitated by the constantly increasing number of Sections into which the Association has been divided. Heretofore the Chairmen of Sections have read addresses before the general meetings, but according to the rule adopted at the last meeting, these addresses will in the future be read before the Sections. At the general meeting the President's Address will be listened to on the first day, and for each succeeding day a single address will be delivered by members of the profession especially selected for this purpose.

The selections made this year will surely meet with universal approval. Professor Roberts Bartholow will address the Association on the second day. The special topic of his address will be, "How Therapeutics may be made an Exact Science—Illustrated by Examples." On the third day, Dr. E. M. Moore, of Rochester, will deliver an address on Surgery; and on the fourth day Dr. H. P. Walcott, of Boston, will deliver a general address on State Medicine.

We give in another department a programme of the general meetings of the next session of the Association.

FEMALE PHARMACISTS IN ITALY.

The Minister of the Interior, of Italy, having had his attention called to the fact that about 3,500 places in the Kingdom have no pharmaceutical service, because young pharmacists refuse to go into the rural districts, has asked the Minister of Public Instruction to admit women to the study of pharmacy. It is not asked that they be given the diploma of phamaceutical chemist, but simply a certificate of ability to

practice pharmacy. It is believed that this will prevent the great inconveniences of the illegal practice of pharmacy, and will provide pharmaceutical facilities for communities in need of them.

It is to be remembered that in Italy, as in other European countries, the drug stores are under government control and supervision—the druggist is a government appointee, and one cannot own a drug store unless he is a pharmaceutical chemist and gets a government appointment. The number of druggists and drug stores is proportioned to the number of inhabitants, both in the cities and in the country, so that the druggist is sure of a legitimate trade, and does not have to eke out an existence by selling patent medicines, toilet articles, paints, kerosene oil, cigars and chewing-gum. The people are likewise protected by government supervision as to the purity of the drugs, and as to the competency of the druggist to prepare them.

This is a further illustration of the fact that while some of the European governments may be "effete monarchies," as our newspapers are pleased to call them, they still act on that sound principle of common sense, that the health of the people is the nation's wealth.

A QUESTION OF CRIMINAL NEGLIGENCE.

A number of years have now elapsed since the question of color-blindness among railway employés was first brought before the public. Since that time so many examinations have been made of the color-vision of railway employés, so many of such employés have been found to be partially or totally color-blind, and so many accidents have been caused by the color-blindness of locomotive engineers and other railway employés, that it becomes a serious question, are not railway companies guilty of criminal negligence—negligence of *ordinary* precautions—when they place their trains in charge of color-blind men, or when they employ color-blind men for positions in which, on account of their defective vision, accidents may result? The facts are so many and so clear that it would be idle for a company to set up the defense that testing the color-vision of their employés is an extraordinary, not ordinary precaution.

There is another question in regard to these tests for color-vision. Are the examinations made, in addition to the Holmgren tests, with colored lights in a dark room? Railway locomotive engineers say that while some men can easily distinguish red and green colors by day, they cannot distinguish red and green lights at night as they should—and conversely. It also seems to be the case that while some men cannot distinguish red and green as such by day, they see that there is a difference, and are guided by it; but on a cloudy, foggy or rainy night, they sometimes find it impossible to make out the real color of the light shown, and are often guided by the better vision of the fireman.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

Stated Meeting, January 16, 1888.

THE PRESIDENT, W. T. BELFIELD, M.D., IN THE CHAIR.

DR. E. J. COLBURN read the report of

A CASE OF EPILEPSY CURED (APPARENTLY) BY THE CORRECTION OF AN ERROR OF REFRACTION.

(See page 189.)

DR. E. L. HOLMES: The report, I think, speaks for itself; I do not know what can be said of much interest in addition. We simply know the fact that, in very rare cases, the proper adjustment of glasses has cured epilepsy. We know that paring a corn may give relief, but that does not prove that corns are often the exciting cause of epilepsy. There are said to be very rare cases in which small shoes with high heels have produced a general nervous condition—headache and disturbance of the muscles of the eyes. It is useless to adjust glasses in the hope of cure until the general nervous condition has been relieved by "common sense shoes." A contracted prepuce may be, although very rarely, the exciting cause of epilepsy. So we can go through the whole series of remote nervous irritation producing the trouble we call epilepsy. There are some cases that are exceedingly interesting but at the same time rare. Many of the cases that are reported are simply coincidences. It shows us, however, how important it is in nervous trouble to seek the cause and to have the eyes relieved as far as possible by proper glasses. This may not only cure epilepsy, but also other nervous troubles.

DR. F. C. HOTZ: The case reported bears on a very interesting question which only within the recent past has attracted general attention. If this was the only case and we had to judge the result of the treatment on its own merits; that is, if it was a single isolated case, without any other experience to support it, of course we would be rather reluctant to admit the doctor's conclusions, even perhaps in the modified form, as apparent relief; especially as, in the history of this case, besides the adjustment of glasses other means have been used which are known ta give temporary relief in such attacks. But, fortunately for the reporter and fortunately for us, similar cases have been reported, especially through the methodical investigations which Dr. Stevens, of New York, has carried on for the past ten years. It was

he who conceived more clearly than anyone else, I think, the idea that functional disturbances in the eye, an overtaxing of the muscles adjusting the sight or controlling the motions of the eyeballs, have a far-reaching influence on the whole nervous system of the human body, and are among the most prolific sources of nervous diseases. It is well known that irritations of the eye go far to excite reflex irritation somewhere else; I need only refer to the general disturbances created by an attack of glaucoma or iritis. But I believe, in cases like the one reported to-night, the general nervous disorder is not caused by reflex irritation (for there is no irritation in the eyes); but it is the result of an overtaxing of the nerve forces. Every human organism is endowed with a certain amount of nerve force; in some this force is largely in excess over the amount necessary for all demands of the physiological functions; in other persons, however, it is barely sufficient. It is this latter class, which has no reserve force to draw upon, that constitutes the large army of so-called nervous people. Now if in such a person, to whom the nerve force has been scantily measured out, the adjustment of the sight or the harmonious movements of the eyeballs are executed with difficulty, requiring a greater nerve stimulus than under normal conditions, the eyes appropriate a larger portion of the nerve force than they are entitled to; they continuously drain, as it were, the resources of the nervous system, exhausting the supply of nervous force which ought to go to other parts of the organism, and under these conditions there a very trifling exciting cause may produce marked neurotic disturbances.

When we read the published observations of Dr. Stevens, based upon 2,000 cases, we cannot help admitting that there is a great deal of truth and logic in his conclusions; even if we assume that a pioneer in a new field is unduly enthusiastic, and perhaps carries his conclusions a little further than the actual facts will admit on cooler reflection and larger experience. We owe Dr. Stevens a great deal for pointing out this subject; it is as interesting to the general practitioner as to the oculist; it will induce the practitioners to pay more attention to the diseases of the eye than they used to. It is a field in which the general practitioner and the specialist can very profitably coöperate, because these cases usually consult the general practitioner first; we do not see them unless they have marked disturbance of the eyes, and thus we often accidentally relieve other troubles. I suppose every oculist has had an experience similar to my own, that patients who have been forgotten by us meet us years afterwards and thank us, saying that by adjusting glasses or relieving some other functional disturbance of the eye they were relieved of chronic headaches or other nervous disturbance. It is the systematic investigation of the relation of eye-strain and nervous disorders which I think is the great merit of Dr. Stevens, and such observations as have been reported to-night are valuable contributions to confirm Stevens' conclusions.

DR. W. F. COLEMAN: The report that Dr. Colburn has made is exceedingly interesting, and if I understand him aright in regard to the treatment, all previous treatment had almost entirely failed to relieve the patient and nothing had been accomplished when he adjusted the glasses, and subsequently to that the patient was apparently cured. The inference is fair that the adjustment of the glasses was the means of curing the patient. In reference to the cause of eye-strain, we see it in three directions: In errors of refraction; in insufficiency of the orbital muscles; and of accommodation, actual or relative. All oculists agree as to the effect of eye-strain in producing peripheral and central nervous symptoms. In my own experience correcting insufficiency of muscles has relieved most severe and persistent headache, such an amount of headache as to induce the general practitioner to send the patient to me for examination of the eyes, to determine whether there was cerebral disease, and there would not be found any optic nerve trouble, but an error of refraction or insufficiency of ocular muscles which, relieved by glasses, relieved the headaches. Migraine is another disease which is frequently relieved by correction of errors of refraction. A few days ago a patient came to me who had persistent nausea occasioned on every attempt to read, and which, if persisted in, almost induced vomiting. I corrected a trifling astigmatism and the nausea was at once relieved.

As to the cause of epilepsy: if peripheral irritations, as phimosis, calculus of the bladder or irritation of the ovary will produce an epileptic seizure, why not such a constant source of irritation as an eye-strain caused by an error of refraction, or, possibly more commonly still, by insufficiency of ocular muscles?

As to Stevens' results: he claims that of 64 patients on whom he operated on the ocular muscles, dividing the internal recti for insufficiency of the external, he cured 50 per cent., 40 per cent. were relieved, and only 10 per cent. unrelieved. Dr. Ranney, who is a follower of Stevens, has operated on 200 patients. He has treated 16 patients for epilepsy (8 by operation), cured 3, and relieved 4 out of 5 of the remainder. Dr. Stevens' claim seems to us as professing too much, but when we take his results into consideration we can scarcely be totally skeptical.

I suppose his method is that when the insufficiency is in the internal rectus muscle, which is determined by examination with prisms, he punctures the external rectus muscle, leaving the inferior and superior border of the muscle intact if there is only a limited amount of insufficiency, say 5° or 10°. We cannot dispute his clinical results, but what astonishes me is the claim of insufficiency of the internal rectus being relieved by a puncture of the external rectus. I do not say that it is impossible, but it astonishes me that a simple puncture of the external rectus will relieve an insufficiency of the internal. That is the means which Dr. Stevens resorts to to relieve his patients. He finds errors of refraction and accommodation and corrects those errors. In one instance, in an asylum, he selected 12 cases of epilepsy with dementia. Those 12 cases had, in the month previous to his operation, 170 attacks of epilepsy, but subsequent to his operation, which consisted of puncture of the external

rectus muscle principally, they were relieved to the extent of 75 per cent. This statement is corroborated by the Superintendent of the asylum.

These are facts, whatever the explanation may be, that we cannot ignore and cannot be altogether skeptical about. I have great respect for these statements, and full confidence that the claim by the reader of this evening's paper of an apparent cure of epilepsy is the direct result of the correction of an error of refraction, and I think from the course of treatment pursued before the error was corrected that the inference is very fair.

DR. CASSIUS WESCOTT: As I had the pleasure of seeing the case reported by Dr. Colburn, I would like to emphasize one or two points: I think there can be no doubt as to the patient's epilepsy; his attacks as described and as witnessed by myself were quite characteristic. In some of his attacks he was, no doubt, unconscious, but in others he probably did not lose consciousness. But the condition of unconsciousness is not now regarded as an absolutely essential feature of an epileptic attack. I have seen patients in the Illinois Eastern Hospital for the Insane, who had frequent attacks of *petit mal* and *grand mal*, who were evidently conscious throughout some of those attacks.

As to the treatment of this patient before he got his glasses, I think it could have had very little effect after the adjustment of the lenses, because the doses of bromides were small and discontinued entirely before the glasses were used. I believe that any person of a neuropathic tendency may have epilepsy induced by any persistent local irritation, and those of us who have experienced eye-strain know full well what an annoying irritation it is.

The theory of Dr. Stevens seems to me quite rational; but regarding the cause in this case as simple local irritation, I think it was quite sufficient, for I had the opportunity to witness the distress the patient suffered from attempts to use his eyes without glasses, and his general nervous irritation was clearly manifest. The flushing of the countenance and distension of the vessels of the head was quite noticeable.

DR. J. E. COLBURN: It is a well-known fact that hypermetropia and astigmatism, and any error of refraction that increases the effort of the ciliary muscle, also increases the action of the internal rectus, and almost invariably we get with hypermetropia more or less preponderance of the internal rectus. Of the 375 cases of hypermetropia that I have tested during the past year, with this in view, I have found over 95 per cent showing a preponderance of the internal rectus. Not necessarily a lack of strength of the external, but the comparison between the two making it either a preponderance or an insufficiency, whichever you choose to call it. Regarding the method of operating: I had, two years ago this spring, the pleasure of being with Dr Stevens two or three weeks, witnessing his daily office work. The operation is simply taking the conjunctiva up, cutting through it and then exposing the ocular end of the tendon, grasping this with a pair of forceps and snipping away the central portion of it, not detaching it completely, but leaving it adherent above and below. I know that this will relieve as high as 12° of insufficiency and many times give a result of divergence. In a case that I recently operated on in which there was hystero-epilepsy, a marked case which had been under the treatment of some of our best specialists, the result was a — 2, and I only cut the central fibres. I know it because when I did the operation I felt the attachments above and below. The operation was done four weeks ago; up to the time of the operation she had had repeated seizures, but has had none since. A case that I tested nine months ago has had but one seizure since, although she had been having them almost constantly before that. In this case the treatment was given without the patient being conscious of our object in giving her relief; she had never had any consultation with her physician about glasses giving her relief, and nothing was said to her by the family.

In regard to the statement of no loss of consciousness: It was the patient, not I, that made the statement. I saw him in one attack in my office when I knew he was unconscious. He was under treatment in one of the best Western asylums and had all the care that could possibly be given; but immediately on resuming his work the seizures returned with their old violence. After he came under my observation he attempted in my office to do a little writing, but just as soon as he tried to do anything of that kind I could see the pulsation in his head and neck, the capillaries would show marked distension and he would become morose and sullen, then he would go out and wander around the streets for a few hours and have a seizure on the street or at his boarding-place. But since I put him under treatment up to this time he has had but one seizure, and from a flushed, red-faced, brawny looking fellow, a man who looked as though he would have all the bad impulses and habits of drink (many times I thought he must be under the influence of opium or liquor), he has improved until people who knew him before hardly recognize him. When he was at school there was much the same manifestation, though in less degree.

I do not claim that errors of the recti muscles are the cause of many cases of epilepsy, but I think that in certain cases it is so. I have known Dr. Stevens' work for fifteen years. He was my instrnctor in Albany in 1873, and I have seen his work at intervals during these years. While he is an enthusiast, he is honest and candid, and his work will show him to be conscientious and an accurate observer. I remember that a few years ago it was almost a disgrace to speak Dr. Stevens' name; it would be said, "Oh, he's the prism crank!" He labored under disadvantages. The question of reflexes had not received its full recognition. But I think any one who has suffered from error of refraction can easily see how an irritation of this kind can produce cerebral congestion and this go on until it explodes in the form of a fit.

I remember a case of a boy of 18 or 20 years who, during the latter part of every term of school, would suffer from nervous sick headaches until he would get into a hysterical condition and have to leave

school. Bromides and chloral were tried, but all of his school life was marred by this defect, and it was not until the error of refraction was corrected that he was able to do systematic work.

I saw many of Dr. Stevens' cases of epilepsy, and it was wonderful to see the results of two or three weeks' treatment. Patients would come there—drooling, idiotic children, young men and women, and their whole physical condition would seem to be changed. I remember a child, in appearance about 13 years of age, but in reality 18 years old. She was drooling and idiotic-looking, and in three weeks I saw the child and failed to recognize her. Her head was up and her whole bearing changed, and she was bright-looking. Before that she would come into the room sullen, suspicious and angry. It seemed almost a marvel, and I do not wonder that Dr. Stevens is many times seemingly extravagant in his statements.

In regard to failure to cure, I think it is well established that nervous cases are the most difficult to manage. There is a certain condition, a neurasthenic tendency acquired or hereditary, and when the predisposing cause is removed there may be for a long time a slight irritation. I have noticed many times in treating cases of chorea, directly due to errors of refraction, that the patient would show marked signs of movement every time the menses came on, showing that a little disturbance throwing the system out of its usual routine would bring it about.

I call to mind a chorea patient that I first saw on a street-car. She was with two women who got her in and out of the car as well as they could. There was something about the position of her head and eyes that attracted my attention. As they were evidently poor people, I handed my card to them. They called upon me in the course of three weeks. It required the efforts of the father, mother and sister to get the child into the office. Within two months from the time of her first visit and two weeks following her full correction, H. a = + 2, + 1 ax 90, the chorea had almost disappeared—so much so that a person unacquainted with her would hardly notice the unusual motions, and within a year there were no choreic motions except a nervous movement of the hand. Before that she was fast getting into an epileptic condition. Now she is perfectly well, using her glasses. In her case I was obliged to do tenotomy to relieve 80° insufficiency. In the case of Mr. T. I did not do tenotomy, as I was able to overcome the insufficiency. I had plenty of time and I practiced him with prisms for a month or six weeks and then taught him how to do it. I would again call attention to the intimate relation between hereditary nervous headaches, chorea, epilepsy and insanity; to the hereditary transmission of ocular defects and their resulting irritations, and to the apparent frequency with which they occur in the same patients.

(To be concluded.)

Dr. Henneage Gibbs, late of Westminster Hospital, London, has just entered upon his duties as Professor of Physiology in the Medical School of the University of Michigan.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, December 8, 1887.

THE PRESIDENT, T. M. DRYSDALE, M.D., IN THE CHAIR.

(Concluded from page 186.)

DR. M. PRICE exhibited a

KIDNEY REMOVED FOR GUN-SHOT WOUND.

The patient, a young girl, was handling the weapon when it exploded, the ball entering in front, on the right side, and passing through the liver and kidney and burying itself in the spinal muscles. At the time of the operation, twenty-four hours later, the pulse was 150, the temperature 103°; peritonitis had set in and the patient was in a collapse. An incision six inches long was made and arterial blood was seen escaping from the kidney, which it was thought best to remove. The liver wounds were dry and not oozing. Rapid improvement continued for nine days, but there has since been a rise of temperature, and now, the 19th day, temperature is 100°, pulse 108, and all doing well.

DR. KELLY said that Dr. Price would have to defend himself better for removing that kidney. The indication was almost as great for removing the liver, which the ball had also traversed. The hilum was a half inch distant and a suture would have been safe and would have checked hæmorrhage. I thus stopped the flow following the puncture of a trocar in a case of hepato-phlebotomy which I performed a few weeks ago. I think Dr. Price will find sufficient evidence for this late rise of temperature in a focus of suppuration around the ball in the lumbar muscles.

DR. J. PRICE remarked that a large quantity of arterial blood had been voided from the bladder a few hours after the injury: this hæmorrhage was irregularly recurrent showing its kidney origin, and that large vessels about the hilum of the kidney had been wounded. Stitching of the kidney would not have been sufficient—incision and ligation was out of the question. All the indications were for removal. The diagnosis had been clearly made of renal injury.

DR. M. PRICE said the kidney lay far up under the liver, and was hard to get at, that even if a suture could have been put in the anterior wound it would have been utterly impossible to have reached the posterior one, excepting by another incision through the back; besides this, the blood welled up so freely that is was not possible to see exactly what he was doing, and he had to trust to his sense of touch. He could not account for the high temperature at this late date, excepting it be from the collection of pus at the end of the tube, which was not removed, as it should have been.

DR. B. F. BAER presented the specimen and read the following report of

A CASE OF TRAUMATIC HÆMORRHAGE INTO AN OVARIAN CYST, FOLLOWED BY PERITONITIS. OPERATION. RECOVERY.

I feel warranted in presenting this specimen and relating the history of this case because of its unusual

character. E. A., æt. 45, married, seven children, youngest 7 years, miscarriage two years ago; had always, until the present trouble, enjoyed good health. In December, 1886, while engaged in rearranging her furniture she lifted one end of a heavy chest. She soon after became conscious of a slight pain in the left ovarian region, but she continued with her usual work. That night, however, she was awakened by a sharp pain in this region, so severe as to cause her to "bend and writhe in agony." The pain extended down the left thigh and to the back, was accompanied with nausea and vomiting, and continued with great severity during the entire night before she obtained any relief whatever. On the next day her entire abdomen had become very tender and swollen (tympanitic), but the severe pain of the night before had subsided. She gradually recovered from this attack, and was about again within two weeks, but she still had occasional attacks of sharp pain, and was treated for neuralgia. Soon after this she noticed that her abdomen was larger than usual. She had changed physicians and was treated for "dropsy and worms," by free purgation. This greatly prostrated her and caused a return of the pain and other symptoms of the first attack.

My friend, Dr. O. K. Adams, was now called, and found the patient in great agony, the pain being most severe in the left ovarian region, but extending over the entire abdomen, which was tympanitic. The thighs were flexed, and her expression anxious. Temperature 103°. On the next day it had risen to 104°. She remained very ill through the next few weeks, after which she gradually improved. When the tympanitis and tenderness had subsided enough to permit an examination, Dr. Adams discovered a cystic tumor in the lower abdomen, which he correctly pronounced ovarian. As soon as she was able to be moved, the patient was sent to me.

On examination, with the patient in the dorsal position, I found the abdomen distended by a circumscribed mass which occupied a position between the umbilicus and the pubis, projecting and about the size of the pregnant uterus about the sixth month, though not symmetrical, being to the left of the median line more than to the right. There was no resonance over the entire surface of the abdomen, even over the tumor on light percussion; deep percussion, however, gave a dull note. By palpation the tumor was found to be fixed to the abdominal walls and deeply in the left pelvic region. Vaginal examination showed the uterus to be retroverted, and upon it the lower surface of the abdominal tumor.

To the left of the uterus a nodular mass was felt, apparently connected with the lower surface of the tumor. Movement of the tumor caused the uterus to move with it. Fluctuation was elicited by bimanual palpation. I advised immediate removal of the tumor, although the patient had not yet fully recovered from the last attack of peritonitis. Temperature still above 100°, sometimes 101° in the afternoon. This advice was based upon the recurrent character of the inflammation, and its probable traumatic origin—twisting of a pedicle or rupture of a blood-vessel. Rupture of an extra-uterine gestation sac had been suspected, although signs of pregnancy had been absent. There had not been suppression of menstruation, bnt since her first attack of pain her catamenia had been very profuse, lasting from ten days to two weeks.

Operation, March 15, 1887. Incision 3 inches long in the usual position, and the tumor exposed. It was now found that adhesion between the cyst wall and that of the abdomen was so intimate that it was difficult to distinguish which was the cyst and which the peritoneum. I began by separating the tumor from the peritoneal surface, hoping to find a place where adhesions did not exist, but in this I was disappointed, for the peritoneum was firmly glued to the anterior and lateral surface of the cyst wall, while above the intestines and omentum were closely adherent to it. The tumor was now tapped, and a thin, serous-looking fluid tinged with blood, was drained away. The cyst was only partly emptied, as it contained a semi-solid material which could not flow through the canula. Room had, however, been gained so that the dissection could be continued. By a careful manipulation the upper part was separated from the intestine and omentum by amputating the latter, when it was found that the lower lateral surface was adherent to the sigmoid flexion, while the base of the tumor, broad ligament and uterus were so united as to form one mass.

After farther dissection the cyst was drawn out and the short thick pedicle examined. This was found to contain masses of thick, clotted blood, both within and around it. After further cleaning and examining, this nodular mass was found to be the Fallopian tube, distended at several points with clotted blood. A temporary ligature was now thrown around the base of the cyst, which was then removed. This facilitated the further dissection which was necessary to form a proper pedicle, which was now transfixed and tied, and the smaller mass cut away. The right ovary was healthy and was not removed. The abdominal cavity was next thoroughly cleansed, a drainage tube inserted and the incision closed. The patient recovered, and went home on the twenty-eighth day after the operation, but it cannot be said of her that she recovered "without a bad symptom." She did comparatively well during the first four days, but on the fifth day her temperature increased to 103°, although there was no pain or other symptoms of active inflammation, the next day it was 104°. The patient now complained of pain at seat of pedicle, and the left leg was found to be slightly swollen. The drainage tube was now removed, although there was still some discharge through it. The bowels were also moved by a turpentine enema. Her improvement after this was slow, but sure, and she sat up on the eighteenth day.

Examination of the specimen after its removal showed it to be a thin-walled monocyst. It was quite half-filled with a fibrinous material, a portion of which is presented with the cyst. This was not attached to the cyst wall, and resembled coagulated blood in process of organization. The lining membrane of the cyst was smooth, except at several places where a dilated vein as large as a quill was apparent.

The knotted irregular mass which formed the pedicle was the Fallopian tube and broad ligament. Why it was in this condition is difficult to determine, unless it was from twisting of the pedicle, but this could not be fully made out at the operation. The dilated condition of the veins in the cyst and in the pedicle and the evidence of hæmorrhage within the cyst cavity, as well as around the pedicle, render it probable that rupture of blood-vessels from stasis had taken place.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, January 25, 1888.

THE PRESIDENT, J. SOLIS-COHEN, M.D., IN THE CHAIR.

DR. JAMES TYSON exhibited

FLEISCHL'S POLARIZING SACCHARIMETER,

made by Reichert, of Vienna, and explained its use. The deviation is indicated by the displacement of a dark band continuous in two parallel spectra, when no glucose is interposed and the instrument reads o. When a column of sugar is interposed a deflection takes place, and after the continuity is again restored the *percentage* of sugar is read off from the vernier. Dr. Tyson said the polarizing saccharimeter could not be recommended for testing qualitatively very minute quantities of sugar, say anything less than ½ of 1 per cent., Fehling's solution being really more delicate. Nor can it be said that there is any saving of time in testing quantitatively solutions containing less than 1 per cent. The advantage of its use is shown in determining from day to day the quantity of glucose in specimens containing considerable amounts, where the requisite dilution and titration occupy much time. In very clear urines it is not necessary, with Fleischl's instrument, to decolorize with acetate of lead solutions, but where they are not almost colorless it is necessary to treat with basic acetate of lead in the proportion of 1 c.c. to 10 of urine and filter, when one-tenth should be added to the reading of the vernier.

DR. L. WOLFF said: The instrument to which Dr. Tyson referred, and which I had the honor to bring before you here, is known as a polarization-microscope, though this is an improper term, as it is simply the utilization of the microscope stand for the adjustment of the parts of a polarizing saccharimeter. I imported the parts constituting this about a year ago from the manufacturer, Paul Waechter, of Berlin. Its principal advantage is that of price, which, to the best of my recollection, is about twenty-five dollars when bought here. Like all other saccharimeters it consists of a polarizer which, as you see, is attached to the substage; on the top of this fits a plate consisting of two demidisks of quartz of opposite rotary power, which let the intersecting line be readily seen through the analyzer. This latter with the vernier and nomus fits into the microscope instead of the draw tube. The analyzer or scale can be so adjusted that when the nomus points to o° the two semidisks will be of an even neutral violet tint. In this position it is fixed with a screw. The tube is then withdrawn and the glass container with the urine is screwed in, when the whole is replaced. In looking through the instrument it will now be seen that the two semidisks are no longer of neutral tint, but one is red and the other blue. On rotation this inequality of color will disappear at a certain point, and when the neutral violet tints are again seen, the angle is read off. With this angle you can refer to the accompanying table and read off the amount of sugar present in grains contained in one litre, or by dividing this by ten the percentage will be arrived at. I have used this little instrument a great many times, and find that it is quite as accurate as the larger and more expensive apparatus.

It is my custom to make about six readings, which is very rapidly accomplished, and take the mean thereof by dividing the sum of the readings by six. With some practice and an eye trained for color the results come generally within $\frac{1}{10}$ of 1 per cent. of the amount of sugar present. Like every other instrument, it requires practice to get good and accurate results. While for those who have to make many quantitative determinations of sugar in urine the polarizing saccharimeter offers great advantages. I quite agree with Dr. Tyson that, for single and isolated determinations, Fehling's method is quite as rapid and certain as reliable. The general use of the polarizing saccharimeter together with its advantages and disadvantages, and also the preparation of the urine for that purpose, have been so fully explained by Dr. Tyson, that there is nothing further for me to add.

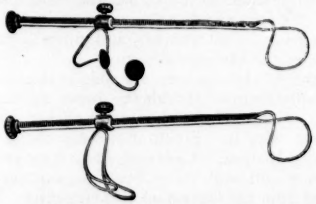
NEW INSTRUMENTS.

SELF-RETAINING PALATE RETRACTOR.

BY JOSEPH A. WHITE, A.M., M.D.,

SECOND SURGEON TO THE RICHMOND, (VA.,) EYE, EAR, AND THROAT INFIRMARY.

After some months of experimentation, I beg leave to submit to the profession the useful instrument represented in the accompanying cuts.



The principle of its construction is so very simple, that it is strange we have not had such an appliance long back. It is made by Mr. Charles Wiltner, 224 N. Howard St., Baltimore, Md., who perfected it for

me about the middle of December. Since then I have used it so frequently and with such perfect satisfaction, both for the examination of the post-nasal cavity and for various operations therein, such as removal of adenoid tissue, snaring lower turbinated hypertrophies and galvano-cauterizations, that I now consider it an invaluable addition to the rhinologist's armamentarium. For a long time back I had used to draw the palate forward, for examination, a simple loop of silver wire, with a short rubber band which caught between the teeth when practicable, or with two long rubber loops which hooked over the ears, as less uncomfortable than passing a piece of rubber tubing through the nostrils out of the mouth, and tying it over the upper lip.

The latter method I always used for *operations*, as more reliable and less likely to become displaced than the former. The present instrument, however, does away with both methods, and is infinitely preferable to either.

It is made of a square steel bar about 3 mm. thick, terminating in a loop of pure silver wire heavy enough to hold the palate and light enough to be readily changed in shape by the fingers to suit each individual case, being made smaller for children and larger for a more capacious pharynx. On the bar slides the attachment which clamps over the upper lip and holds the retractor in position. This sliding attachment, with two arms, requires no fixation to keep it in position, the tension being alone sufficient to make it immoveable on the square bar. For greater security, however, in performing an operation, a small fixation screw is attached to the side of the slide to fasten it securely, so that facial contortions must not displace it.

As shown in the plates, I had two attachments made at first, one with two steel wire arms terminating in silver wire loops, the ends of which caught in the nostrils, or on either side of the alæ of the nose, and another attachment terminating in two hard rubber buttons, which caught in the depressions over the alveolar processes on the same principle as a similar instrument described in the *Medical Record*, of Jan. 14, 1881, by Dr. Porcher, of Charleston.

The reason of the two attachments was that I found in some cases one suited, and in others the second attachment was preferable. Since the plates were made about January 1, I find the one with silver loops answers both purposes, as it can be moulded by the fingers to suit any case, just as the terminal loop of the bar which catches the palate.

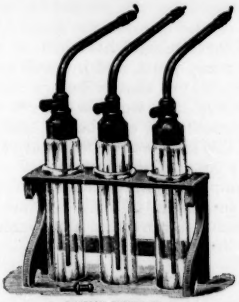
There is but one objection to urge against the instrument, and that is, that the bar may get in the way of operating in the right nostril, but this does not hold good if the operator is ambidextrous, and moreover, it is so small that it is not much of an obstruction. It is applied and moved so rapidly that it can be taken away repeatedly in performing operation to rest the patient or the surgeon. My experience already has demonstrated its great advantages over any known method for working in the post-nasal cavity, and I am satisfied any of my confrères who give it a trial will agree with me.

A NEW ATOMIZER FOR OFFICE USE.

BY E. FLETCHER INGALS, AM., M.D.,
PROFESSOR OF LARYNGOLOGY, RUSH MEDICAL COLLEGE, ETC., CHICAGO.

I wish to call the attention of the profession to a new atomizer for office use, that has been made at my request by the Davidson Rubber Company. It is known as "Davidson's Combination, No. 66," by which name it can be procured through any of the instrument dealers in this city.

All atomizers, thus far, have been more or less defective, but the one shown in the cut comes nearer to perfection than any other I have seen.



The spray-tube is made of hard rubber and consists of two parts, an inner and an outer tube. The inner tube through which the fluid rises, extends from the bottom of the bottle containing the medicated liquid, to the end of the spray-tube, where it is capped by a smaller movable tip. The outer tube, which conveys the blast of air, extends from the top of the bottle, to which it is firmly fixed by a screw thread, to the end of the instrument, where it is capped by a removable tip. There are three different tips for each outer tube, which enables the physician to throw a spray either horizontally, at a right or oblique angle, up, down or laterally. One of these tips is half an inch in length, which renders it peculiarly serviceable for throwing spray into the naso-pharynx, a place that it is impossible to reach in a majority of cases with the short tips furnished with other instruments. As the tips of both the outer and inner tubes can be easily removed, the tubes may be readily cleansed if they become stopped. By removing the tip from the inner tube, and screwing down firmly the tip on the outer tube, this instrument will throw freely fluid cosmoline or oil, even with a low pressure, or by the hand ball.

Each of these atomizers is so constructed that it fits accurately upon the air cut off, manufactured by the same firm, and with each set is an extra attachment which enables either of the instruments to be used with the ordinary rubber hand bulb.

These instruments are put up, three in a set, in a neat little rack, and as each has three tips, the set is equivalent to nine spray-tubes of the ordinary apparatus.

The tubes being made of rubber, anything which

a physician is likely to employ as a spray may be used through them without injury, excepting iodine. All metallic spray-tubes, (excepting very expensive platinum) corrode with various solutions, and are therefore soon ruined. Glass tubes are more bulky than these, are more difficult to clean, and are subject to a great deal of breakage, which renders them expensive, while at the same time three of them are required to answer even a part of the purpose of one of these.

The spray tube itself, in these instruments, is not new, it being the same as that in Davidson's No. 59, old style, hand atomizer, which, by the way, is now the best instrument in the market for the patient's use, if one is careful to order the screw top and long tip. One of these tubes I have had in almost constant use for many years, and it is still good.

I have brought this matter before the profession because I believe that we now have a much more reliable instrument than ever before, and I believe a single set of this kind would be found very valuable even to many general practitioners.

For the complete outfit of a laryngologist's office nothing can surpass in utility a suitable number of these instruments, arranged in a convenient rack.

No. 70 State Street.

FOREIGN CORRESPONDENCE

LETTER FROM PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Muscular Force of Epileptics—Nature and Treatment of Granular Conjunctivitis—Antiseptic Treatment of Diphtheria—Treatment of Burns.

At the last meeting of the Société de Biologie, Dr. Féré read a note on the muscular force of epileptic subjects. From observations of several epileptics in his hospital ward, he ascertained that the muscular force of these patients, measured by the dynamometer, was less by one-fourth or one-third that of healthy individuals. This is contrary to the generally received opinion. The author then wished to ascertain the modifications these muscular forces underwent in the different manifestations of the disease. Dr. Féré noticed that frequently the "aura" coincided with a diminution of the muscular force, and that the same was the case after the fit, whether the latter was complete or incomplete, as well as after simple vertigo. He also noticed that this diminution was generally predominant in one of the sides of the body, and it was precisely in that side where the convulsions predominated. This fact is not to be wondered at, and it confirms the theory of Hughlings Jackson, who claims that the period of stertor consecutive to the fit is comparable to an attack of apoplexy with hemiplegia. Dr. Féré moreover noticed that the diminution of the muscular force was more marked after the nocturnal than after the diurnal attacks.

In his thesis for the doctorate, M. Desormes chose for his subject the nature and treatment of granular conjunctivitis. Starting from the principle of the contagiousness of granular conjunctivitis, which had been demonstrated by Sattler and other observers to be due to the presence of a specific microbe, the author advises the application of local and at the same time general treatment. The former is to be directed against the infecting agent, whilst the latter should have for its object the placing the organism in a state to resist this agent. As long as the granulations have not reached the period of organization, the author employs the glycerate of the sulphate of copper in the proportion of 1 to 8 parts. When once the cicatricial tissue is formed, the microbe becomes surrounded by a sort of fibrous shell which protects it against the action of the drug. In these cases, after having rendered the conjunctiva insensible with cocaine, the granulations must be lightly touched with the point of a small camel's-hair brush dipped in a solution, very concentrated, of chromic acid. The next day the small scar which had been formed will be found detached, and one is then able to cauterize the eyelids with the glycerate of the sulphate of copper which, in this manner, is put in contact with the microbe. Five or six cauterizations with the chromic acid suffice to obtain a notable improvement. The cauterizations should be practiced every four or five days. At the same time the organism should be supported by means of appropriate remedies and substantial food. Elevated positions are very favorable to the cure, as it has been observed that conjunctival granulations do not develop beyond a certain height.

In the *Archives de Laryngologie*, Dr. Legendre, writing on the antiseptic treatment of diphtheria, states that after having examined the different antiseptic remedies imagined against this malady, the author brings prominently to notice the energetic procedure adopted by Dr. Soulez, of Romorantin, and which has been applied by Dr. Gaucher, physician to the hospitals of Paris. The principle of the treatment is to concentrate all the efforts of the physician in the destruction of the false membranes and the antiseptic cauterization of the subjacent mucous membrane. The treatment consists in the application with a rather stiff brush impregnated with a saturated solution of carbolic acid and camphor in alcohol, but before applying the brush the superfluous liquid should be pressed out so as to prevent any of it falling into the larynx. The brush is then vigorously applied to all the parts of the throat which are covered with false membranes, and in such a manner that as much of the latter may be mechanically removed as may be possible. The application should be made three or four times in quick succession, without being deterred by the terrible sufferings caused by the operation. This should be done twice daily until the false membranes have ceased to be reproduced. In the intervals frequent irrigations with a solution of carbolic acid of 1 per cent. should be practiced. The absolute condition of the success of the treatment appears to be in the energy with which the cauterization is practiced. One must not only remove by rubbing the pseudo-membranous layers, but the denuded mucous membrane must be

modified, and the penetration of infectious agents into the capillaries, become gaping and bleeding by this denudation, should be prevented. There is, however, one grave objection to this method: and that is, it interferes with deglutition and alimentation by the intensity of the inflammatory reaction which it produces. Nevertheless the remedy, however cruel, is necessary, and the medical man should really be armed with sufficient stoicism to be, as it were, callous to the sufferings of the patient. It was to the adoption of this energetic measure that Dr. Gaucher attributes the saving of the life of a hospital interne (Albaram) who contracted diphtheria for the second time in the same year at the hospital for children. He very probably would have succumbed, judging from the increasing gravity of the symptoms, had not Dr. Gaucher applied, in all its rigor, the method above described, and it was from this moment that an amelioration which ended in cure became manifest.

In the Paris letter that appeared in THE JOURNAL in October last was given a new treatment for burns. I now transcribe another from *Le Monde de la Science*, which consists in the application of compresses imbibed with a solution composed of from 5 to 15 grams of the permanganate of potash to 30 grams of water. The compresses are composed of calico and are frequently renewed. The remedy is certainly efficacious, but only in congelations of the first or second degree, and in burns of the first degree. In all cases, it rapidly suppresses pain and removes inflammation. When blisters are intact, suppuration is always prevented. A. B.

DOMESTIC CORRESPONDENCE

BOSTON LETTER.

(FROM OUR OWN CORRESPONDENT.)

Dr. Billings' Lectures on the History of Medicine.

A series of eight very interesting popular lectures has just been delivered to the people of Boston by Dr. John S. Billings, of Washington, D. C. The audiences that listened to these lectures were much smaller than seemed warranted by the importance of the subject and by the reputation of the distinguished doctor, and particularly this may be said in regard to the number of professional men present. From his long connection with the Library of the Surgeon-General's office (U. S. Army) at Washington, Dr. Billings is fitted as no other man could possibly be fitted to investigate this subject, difficult on account of its ancient origin, its dependence on traditions, its indefinite records, and the diversity of the theories and beliefs concerning it among different nations and in different ages.

Dr. Billings commenced his first lecture in the series by referring to the ten names arranged in two rows on the front of the new building of the Harvard Medical School. The names in the upper row are: Paré, Galen, Hippocrates, Celsus, Versalius; while those in the lower row are: Haller, Harvey, Sydenham, Hunter, and Bichat. All of them specially prominent in medicine. Then he said, in brief: While the lectures will be devoted mainly to indicating the influence which certain individuals have exercised on the progress of the healing art, it must be borne in mind that to fully understand this influence, it is not enough to consider what physicians only have said or done. To attempt to isolate the history of medicine, and to comprehend its curious ebbs and flows of doctrine from medical writings only, is like cutting a narrow strip from the center of a piece of tapestry and speculating upon the origin and purpose of the cut threads and fragments of patterns that may be found in it. Medical history includes much that belongs to the history of philosophy, jurisprudence, and science, the chief difference being the different names.

The origin of medicine is to be explained from tradition and inference, rather than from history. There are two classes of legends and opinions relating to this subject; the first, which we find as a tradition everywhere, is that medicine is of divine origin and thus it is that in early times we find the healing art in the hands of the priests and connected with religious ceremonies. The second opinion includes such explanation as that given by Hippocrates, that it arose from experience of the effects of certain foods or injuries, developed at a later period as we shall see, into the doctrine of the empirics. Among barbarous and wandering tribes, and among nations of antiquity, we usually find traces of two systems of medicine and of two classes of physicians, one lay and the other sacred, corresponding to the two legends referred to.

Among the savage and barbarous nations of recent times, we find that the priests are usually physicians or medicine men, and are the superior practitioners who are resorted to in obscure or difficult cases, but also that there are others, sometimes women, who treat diseases with simple and natural remedies. The essential remedies are incantations, steam baths, propitiatory offerings, music, noises, and the removal of the evil spirit by suction. This may be seen from authentic accounts of the American Indian, among whom medicine in general, refers to what is supernatural or extraordinary, and the medicine man is one who possesses a knowledge and control of such matters; and in particular it may mean something like spirit; for every animate, and some inanimate, objects are supposed to have their own medicine or principle. The medicine man is much more than a physician; he is priest, rain-maker, and minister plenipotentiary of the supernatural powers, both good and evil. In a report on the Oregon Indians, Major Alvord says: "In some of these tribes any child may be trained for the position of medicine man; but among the Nez Perces, the position is inherited from father to son." The medicine of other uncivilized races is essentially the same as among the American Indians.

Among savage nations we meet with peculiar diseases in which only equally peculiar medicine is of service. Among which may be mentioned the trances of the Cossack women and the peculiar fever found

in Abyssinia, which can only be cured by music and dancing. The very general use of suction as a remedy among savage tribes, not only in this country but in Africa and elsewhere, is curious and not easy to explain, although it may possibly be connected with the animal instinct of licking a wound.

In his "Folk Medicine," Mr. Black points out that three explanations of disease and death appear to be prominent among barbarous and ignorant people, viz: "1. The anger of an offended external spirit. 2. The supernatural power of a human enemy. 3. The displeasure of the dead."

The power of belief, faith, imagination, or expectant attention to affect the material organism is well known. At the present day it is played upon among civilized people: as the charm against warts by children, the faith cure and the consultation of mediums for advice, etc.

The moral of all this, first, that no opinion as to the causes of diseases, the effects of remedies, etc., can be made on a scientific foundation unless the influence of belief and imagination has been carefully eliminated by careful and repeated experiments and observations; and second, it would seem that mental phenomena of the well and of the sick should be a subject of study by the physician, and that this should be remembered in planning a course of instruction for medical men.

In the next lecture the use of magic was referred to in medicine, the remedies of the ancient priests consisting of charms, incantations, and talismans.

The earliest medical book is known as the "Papyrus Ebers," which was found a few years ago between the legs of a mummy in the necropolis of Thebes. Its date has been determined as 1552, B. C., and it is believed to be one of the so-called Hermetic books or writings which formed a sort of encyclopædia of science and philosophy, written by the priests. It is a compilation of receipts derived from different sources. An eye salve is mentioned, and also a hair tonic and certain remedies for skin diseases are introduced. Although it shows that medicine was essentially in the hands of the priests, yet it is entirely consistent with the statement of Herodotus, that in Egypt there are many physicians, some for the head, some for the eyes, and others for different parts of the body.

It does not appear that medicine was regularly studied among the Jews as a separate profession until the rise of the Alexandrian schools.

Among the Aryans in the earlier times, 1500, B. C., the chief of the tribe or father of the family was physician as well as priest. As the Brahmins increased in power and knowledge, they assumed the sole charge of medicine and compiled the Ayur-Veda, a sacred book relating to it. The qualifications of the professional teacher were required to be of the highest order, and the course prescribed was to begin at the age of 12. It was believed that there was a special remedy for every disease, but that its success depended upon the sanctity of the person who gave it, and that its efficiency would be impaired or destroyed if the formula of its composition were made known.

Legends in regard to medicine in China, go back as far as 3100, B. C. The first records we have relating to Greek medicine, are found in the poems of Homer, which we may accept as dating from about 1000, B. C. Then medicine was not exclusively in the hands of the priests.

In the next lecture reference was made to the fifth and sixth centuries, B. C. Then there were fifty to sixty temples of Æsculapius. The chief ones being at Rhodes, Cyrene, Medos, and Cos, the last two being the most important.

Hippocrates (460, B. C.) was a native of Cos. He was in the seventeenth generation a descendant of Æsculapius. He was the best educated of his family, was a contempory of Socrates and Plato. Physiology and pathology were not known at this time. The theory of medicine then was that of the four humus: the phlegm, the blood, the bile, and the atrobile being produced by the brain, the heart, the liver, and the spleen, respectively.

Plato expounded final causes.

Aristotle (354, B. C.) taught Alexander, the son of Philip. He paid some attention to anatomy.

Aulus Cornelius Celsus (Rome, commencement of the Christian era) wrote an encyclopædia which is the first medical treatise in Latin.

The fourth lecture commenced with an account of the second Alexandrian school, which was a mixture of the religion and superstition of the Greeks, Jews, and Christians.

The Arabs derived their medicine from Persia, which in turn got it from India and Greece. The first chemical treatise that we have worthy of the name was that of Geber, written about 840, A. D.

Avicenna (980-1036, A. D.) was the greatest of the Arabic writers on medicine, and for 500 years he rivalled Galen as an authority. The greatest development of medical science was among the Moors in Spain when it was in the hands of the caliphs. In the rest of Europe at this time there was no progress. There were more prayers and the kings and others of means went to the Hebrews for science. The eight crusades (1095-1291, A. D.) had a strong indirect influence on medicine by producing a change in the mode of thinking.

In the fourteenth century there occurred the famous "Black Death," from which one-quarter of the population of Europe lost their lives. The medical faculty of Paris, in a special report, advanced the idea that it was caused by vapors from the sea. Nearly all the specific fevers came from Europe. The first special quarantine was introduced at Venice in 1485, A. D., and it was for forty days, because the "crisis" was then supposed over.

Paracelsus (1493-1541) wrote much but his writings are worthless, except in relation to chemistry and alchemy (magic). He had a tendency to personify and not to abstract, and he founded the doctrine of signatures.

Van Helmont was a follower of Paracelsus who thought that the archeos, or creative principle was a ferment situated in the stomach which converted other things to be like itself.

Sylvius was mentioned in the next lecture as being, together with Paracelsus and Van Helmont, a founder of what was called the chemical school of medicine.

Of the modern forms of the school of Paracelsus there remain three worth mentioning: The first is mesmerism, also called magnetism and hypnotism. The second modern result is homœopathy, founded by Samuel Hahnemann (born 1755). He said: "There must be a perfect system of curing diseases easily, swiftly and surely. But there are only three possible methods. Disease must be remedied by something which produces in the healthy body either different effects or contrary effects, or similar effects. But the use of things which produce different or contrary effects is the ordinary method, which is utterly bad and vicious, since it often kills but never cures. Therefore the only remedy left is that which produces similar effects, and this, which is homœopathy, must be absolutely, invariably and exclusively true." The third modern result is the doctrine of Rademacher, which flourished in Germany about thirty years ago, and which taught that for every disease there is some specific remedy connected with it by the eternal nature of things.

The eighteenth century, so far as medicine is concerned, can be separated from the seventeenth only chronologically. At the commencement of this period there were three prominent medical teachers: Stahl, Hoffmann and Boerhaave, each the founder of a system and for the time having great influence. Connected with the animism of Stahl is another system of medicine, which flourished in the eighteenth century, known as the school of Montpellier, or more commonly vitalism. The doctrines of Hoffmann were diametrically opposed to those of Stahl. He did not believe that the soul is the cause of life, and he taught that the human body is a machine; complicated, it is true, and the life is a function of the organism. Boerhaave took something from all the systems and theories, hoping to unite them all into one homogeneous comprehensive body of doctrine.

The next lecture opened with a discussion of the relations of the physician to the State. In ancient Egypt, Chaldea and India, medicine was kept in the hands of a particular order or caste. This was also the case in Greece early, but we know that Hippocrates gave instruction for money. In the so-called Greek schools each master was a school for himself, teaching all that he thought requisite for the special education of a physician. During the Roman Republic there is no record of any public medical institution. From the tenth to the twelfth centuries dates the foundation of many European hospices and hospitals. Women physicians were first mentioned in 1057.

The separation of surgery from medicine was in part due to the fact that surgery was looked upon as a handicraft, degrading to and unworthy of those belonging to the nobility, as the physicians claimed to do, and partly to the fact that the physicians were priests, who abhorred the shedding of blood. Of the barber surgeons Ambrose Paré, who was born in 1517, acquired so great a reputation and so much influence as to give a sort of reflected respectability to his associates.

Anatomy was spoken of in the next lecture. No advances or discoveries were made in this subject in the Arabian schools, where the dissection of human bodies was contrary to religion, nor in the West, pigs being operated on chiefly, and there was no innovation in this custom until Mundinus, Professor of Anatomy at Bologna, gave demonstrations upon two human bodies in 1315. Zerbi, of Padua, was another anatomist of about the same time.

Andreas Versalius (1514–1564) had the courage to controvert in some respects the opinions of Galen. When men began to believe the evidence of their own eyes even if opposed to the statements of Galen and to the dictates of the church, the time had come for another great step in advance, the foundation of scientific philosophy by the discovery of the circulation of the blood by Harvey. The old theory of Galen was that the veins arose from the liver and the arteries from the heart. Sir William Harvey was born in 1578, and he announced his discovery in 1616–19. This marks the commencement of a new era in anatomy and physiology. Closely following came the discovery of the absorbents or lymphatics, then the lacteals, and so on. The practical side of medicine is typified in Thomas Sydenham, born in 1624, who is often called the English Hippocrates.

Marcellus Malpighi (1661) Professor of Anatomy at Pisa and Bologna, was the true founder of minute anatomy. Albert Haller (1708–1777), born at Berne, was one of the most distinguished men in the whole history of medicine. He was the founder of modern physiology.

John Hunter, born in 1728, was one of the most noted surgeons of his day, and formed the subject of the opening of the last lecture in the series. He was the founder of the school of scientific surgery. His museum at the time of his death contained 13,000 specimens.

Xavier Bichat (1771–1802) revolutionized physiology by introducing the study of the tissues instead of the organs as the foundation of anatomy, and of inquiry into the laws of life. Charles Bell (1781–1842) was a distinguished teacher and writer at Edinburgh. His works were well illustrated. He gave his attention chiefly to the nervous system.

François Majendie (1783–1858) was in many respects the contrast and complement of Bell. Marshall Hall (1790–1857), at Edinburgh, was a lecturer on the principles of diagnosis and was a copious writer on medical subjects. He discovered the reflex function of the spinal cord and the excito-motor system of nerves.

Dr. Billings concluded by saying: "It is not every or any sort of knowledge that enables one to judge wisely in the selection of a medical attendant. One reason for this is the general ignorance of the history of the evolution of medicine into its best form of the present day—an evolution in the course of which nearly every possible mode of blundering and straying from the true path has been tried over and over again. It is not by theories, but by long and patient observation and experience that we come to know of the practice of medicine, and it is only the man or woman who has by long study, based on careful preliminary education, mastered the results of all this work, who is to be trusted as your physician."

VICTIMS OF THE RECENT BLIZZARDS IN THE NORTHWEST ASPHYXIATED BEFORE FREEZING.

Dear Sir:—There is an amount of evidence and a combination of circumstances sufficient to show that the greater number of the several hundreds who lost their lives in the recent great "blizzard" of the Northwest perished from asphyxia and not by freezing. Many of the bodies, when found, were in the position of grasping or clutching at their own necks or throats. In-door witnesses describe the atmosphere as having an appearance of density and darkness, similar to that stated by divers as existing when submerged with their armor in deep water. Many that escaped describe their peril as being from loss of breath or suffocation.

The terrific hurricane force of the wind, loaded with falling snow—the latter being by a fall of temperature whose degree and suddenness has no recorded parallel converted into dry crystals, and thence by the gale ground to a fine dry ice-dust—these conditions produced a state of the atmosphere as unfit for respiration and aeration of the blood as is water for warm-blooded animal life. The extent of the fatality resulting from this storm, also its horrors, will never be fully known. For reasons evident and natural the papers of the region effectually suppress and underrate the actual truth. Your correspondent, while just outside the belt of the storm's fatality, is sufficiently contiguous to obtain information and facts in verification of the views given. The remains of several resident victims have been returned to this localtiy for interment; persons absent upon business or visiting when overtaken by the storm.

The Signal Service Office reported a falling barometer and severe storm at the same hour upon this memorable day, over an area whose extent far exceeds that of any upon its records. From Montana to Cincinnati, Ohio, and St. Paul, Minn., to St. Louis, Mo., was the storm field, whose centre was stated as near Des Moines, Ia. Here we have a cause for results as exceptional as itself. Yours respectfully,

H. C. MARKHAM, M.D.

Independence, Ia., February 8, 1888.

BOOK REVIEWS.

THE RULES OF ASEPTIC AND ANTISEPTIC SURGERY. A Practical Treatise for the Use of Students and the General Practitioner. By ARPAD G. GERSTER, M.D., Professor of Surgery at the New York Polyclinic; Visiting Surgeon to the Mount Sinai Hospital and the German Hospital, New York. 8vo, pp. xi, 332, with 248 engravings and 3 chromo-lithographic plates. New York: D. Appleton and Company. 1888. Chicago: W. T. Keener.

"The object of this volume is a systematic, yet practical presentation of the Listerian principal that has revolutionized surgery within the last fifteen years." This object the author has been careful to keep in view throughout the whole book. The volume is not a treatise on operative surgery—and for this we thank the author—nor is it a collection of rules for the preparation and application of surgical dressings; of such works we have a sufficient quantity. The book may be termed a treatise on operative surgical physiology and pathology, if there be no contradiction in this combination of words. Or, it may be said that the book is a series of illustrated sermons on the text: *The surgeon's act determines the fate of a fresh wound, and its infection and suppuration are due to his technical faults of omission and commission.* And this text is elaborated in the fullest possible manner, but without unnecessary repetition or verbiage, and without any attempt to prove what are now to be considered self-evident propositions in surgical treatment. The book is not written for those that blindly cavil at Listerian *principles*; that would be indeed labor lost. It is full of instruction, but meagre of controversy.

The primary healing of a fresh wound is now to be looked upon as a matter of course rather than as a curiosity or a piece of "good luck." Surgeons that have accepted and acted upon the great Listerian principle have now reached the solid ground of *asepticism*, which lies a step beyond the equally solid ground of *antisepticism*. And it is since they have established themselves upon the firm basis of *asepticism* that they have seen their scope of work widen into fields into which formerly it was dangerous to step. With this extension of the safe-ground of surgery there has been a fruitful development of operative technique.

We have said this much for the purpose of showing the design and scope of Dr. Gerster's excellent book without copying the table of contents, and without quoting extensively from the pages of the book. And if the reader will broaden his conception of the meaning of the title of the work, until the words "Aseptic and Antiseptic Surgery" imply to him all that they can possibly mean, he will have an idea of the object and scope of the work; but until he sees it he will have but a limited idea of its value. The vast majority of the illustrations are made from photographs, and convey an accurate idea of what they are intended to show. W. G. E.

NASAL POLYPUS with Neuralgia. Hay Fever, and Asthma in Relation to Ethmoiditis. By EDWARD WOAKES, M.D., Surgeon to the London Throat Hospital, etc. With Illustrations. 8vo, p. xii, 140. Philadelphia: P. Blakiston, Son & Co. 1887. Chicago: W. T. Keener.

This book is the outcome of a series of investigations that the author has been at work upon for several years. Starting from the observation that in some cases of ear disease there was a catarrhal accompaniment in the nose, that the middle turbinated bone frequently became enlarged, and that the swellings gradually put forth from their surfaces reddish granular masses, which in time became larger, he noticed that these superficial granulations showed a tendency to develop into mucous polypi. This may be regarded as the germ upon which Dr.

Woakes has built up his theory and his book. Two years ago he published as much as then rested on what he considered a firm clinical and pathological basis; and while his views have found objectors, the facts presented have not been contravened.

A useful suggestion for nasal surgeons is the blank diagram for indicating the condition of the nasal fossæ, from anterior and posterior aspects.

One cannot read this book without being impressed with the facts that the author writes from careful study and rich experience, and that if he has not unearthed the truth he has at least come nearer to it than any other writer on this subject.

IRREGULARITIES OF THE TEETH AND THEIR TREATMENT. By EUGENE S. TALBOT, M.D., D.D.S., Professor of Dental Surgery in the Woman's Medical College; Lecturer on Dental Pathology and Surgery in Rush Medical College, Chicago. With 152 Illustrations. 8vo, pp. xi—163. 1888. Philadelphia: P. Blakiston, Son & Co.; Chicago: W. T. Keener.

It may be safely predicted of this book that it will be very favorably received by those members of the dental profession that look upon their profession as a "science and art" and not as a mechanical trade. In the first part of the book the anatomy and physiology of the irregularities of the teeth are considered. The second part is devoted to the various means and methods of treating irregularities. The book is written in a concise style, is well printed, and profusely illustrated.

ASSOCIATION ITEMS.

Programme of General Sessions of the Meeting of the American Medical Association to be held in Cincinnati May 8, 9, 10 and 11, 1888.

The General Meetings will be held in the Cincinnati Music Hall and the Sectional Meetings in adjoining rooms in the same building.

FIRST DAY, MAY 8, 11 A.M.

Meeting called to order by Dr. W. W. Dawson, Chairman of the Committee of Arrangements.

Prayer.

Address of Welcome.

Announcement of Programme of entire Session.

Annual Address by President A. Y. P. Garnett, of Washington.

Call for volunteer papers and their appropriate reference.

New and miscellaneous business.

Notification for the appointment of the Nominating Committee.

SECOND DAY, MAY 9, 10 A.M.

Report of Committee of Arrangements.

Address on General Medicine, by Professor Roberts Bartholow, of Philadelphia.

Annual Report of the Board of Trustees, by J. M. Toner, M.D., Chairman.

Report of Special Committee on Dietetics.

Consideration of proposed amendments to the Constitution.

Announcement of Nominating Committee.

THIRD DAY, MAY 10, 10 A.M.

Report of Committee of Arrangements.

Address on General Surgery, by E. M. Moore, M.D., of Rochester.

Report of Committee on Rush Monument, by A. L. Gihon, M.D., Chairman.

Report of Treasurer, R. J. Dunglison, M.D.

Report of Librarian, C. H. A. Kleinschmidt, M.D.

Report of Committee on Necrology, by J. M. Toner, M.D., Chairman.

FOURTH DAY, MAY 11, 10 A.M.

Report of Committee of Arrangements.

Address on State Medicine, by H. P. Walcott, M.D., of Boston.

Final Report of Nominating Committee.

Report of Standing Committee on Meteorological Conditions, by N. S. Davis, M.D., Chairman.

Report of Special Committee on Criminality of Fœticide and Measures for its Prevention.

Report of Special Committee on Duties commonly exercised by Coroners.

Reports of Secretaries of Sections.

New and miscellaneous business.

The Sections will meet each afternoon at three. A fuller programme, including a list of papers to be read at the Sections, will be published about April 7.

NECROLOGY.

EDWARD FLINT, M.D.

Dr. Edward Flint died May 30, 1880, in Leicester, Mass., the place of his nativity. He was descended from an honorable ancestry, the first record of the family in this country being of Hon. Thomas Flint, who came from Derbyshire, Eng., to Concord, Mass., in 1638, "possessed of wealth, talents and a Christian character." From him presumably come all of the name in this region. His great-grandson was Dr. Edward Flint, who located in Shrewsbury, Mass., in 1756, a surgeon and physician of repute in his day. His son was Dr. Austin Flint, who at the age of 17, was a soldier in the Revolutionary army, subsequently toward the close of the war, a surgeon stationed at or near West Point, and present at the surrender of Burgoyne. He had two sons who were physicians, Joseph H. and Edward, the subject of this notice. The former was father of the late Dr. Austin Flint, of New York.

Dr. Edward Flint was born in Leicester, where he lived and died at the age of 90 years and 6 months. His medical life extended over a period of more than half a century, during which time it was said of him, "that he was known to every man, woman and child around, trusted in his profession, and respected as a man to an extent rarely exceeded." He never sought public distinction, but made the

careful discharge of professional duty the chief object of life, and pursued it with conscientious fidelity, regardless of personal comfort, till compelled by the infirmities of age to relinquish.

He was a life-long member of the Massachusetts Medical Society, at one time its Vice-President, and for many years one of its councillors. He was likewise an early member of the American Medical Association, from 1848, retaining membership therewith for many years. His death resulted from apoplexy, quite speedily proving fatal.

There is one fact in the history of this former almost unique, I believe, which is, that the late Dr. Austin Flint, of New York, and T. S. Flint, of Massachusetts, make the fourth generation in successive line from the first Edward Flint, who have followed the medical profession, while the present Dr. Austin Flint, of New York, is the fifth.

EDWARD BARTON, M.D.

Edward Barton, M.D., was born in Orange, Mass., Feb. 5, 1803, and died at South Orange, May 7, 1880, at the age of 74. He was the son of Pearly Barton, M.D., and direct descendant of Samuel Barton, of Colonial times, who in 1690 resided in Framingham, Mass. He was chiefly a self-educated man, though he attended the district school, and later the academies of New Salem and Deerfield. He studied medicine with his father, and attended lectures at Pittsfield, Mass., graduating first in his class, according to the testimony of Professor Parker, at Woodstock, Vt., 1831, at 25 years of age. His expenses he paid by teaching school, winters.

Commencing practice at Sullivan, N. H., after four years he returned to Orange. Here he remained three years, when he went to South Orange. His intellectual capacities were of a high order, he had keen perceptive faculties, was investigating, discriminating and a hard worker. His judgment was remarkably good, his convictions firm; he was honest, kind and courteous to all; the welfare of his patient was always first in his mind. In consultation at the bedside, all looked with confidence to him and valued his decision.

He became a member of the American Medical Association in 1858, and attended meetings in 1860, 1863 and 1865. Since 1841 he was a member of the Massachusetts Medical Society, and since 1852, a member of the Franklin County Society, holding office in each; was President of the latter Society in 1860 and 1861; was honorary member of the Worcester North Medical Society and was one of the founders and the first President of the Miller's River Medical Society.

MISCELLANEOUS.

COOK COUNTY HOSPITAL, CHICAGO. PUBLIC EXAMINATION TO FILL VACANCIES IN HOUSE STAFF.

Notice is hereby given that a competitive examination will be held at this institution March 1 and 2, 1888, for the purpose of selecting eight physicians to act as Hospital Internes.

The examinations will be in writing and upon the following subjects: (1) Anatomy, (2) Physiology, (3) Materia Medica and Therapeutics, (4) Chemistry, (5) Practice of Medicine, (6) Surgery, (7) Obstetrics and Gynæcology, (8) Pathology, (9) Ophthalmology and Otology.

By resolution of the Executive Committee of the Medical Board, candidates must be graduates of a regular medical school recognized by the Illinois State Board of Health or within four (4) months of graduation from such a school.

DENSLOW LEWIS, M.D.,
Secretary of the Medical Board.

NEW YORK STATE MEDICAL ASSOCIATION—*Fifth District Branch.*—The next meeting of the Fifth District Branch will be the fourth annual meeting to be held in Brooklyn, on Tuesday, May 22, 1888. There will be a morning and an afternoon session. All Fellows are solicited to contribute to the meeting, either by reading papers, notes or communications, or by exhibiting specimens. All papers offered are the property of the Branch, and will be published in a current medical journal. The Secretary desires to be notified of the title of any paper to be offered as early as convenient.

E. H. SQUIBB, M.D., *Secretary.*
P. O. Box 94, Brooklyn.

PROFESSOR ASA GRAY, the distinguished botanist of Harvard, and one of the best known scientists in this country, died on January 30, at his residence in Cambridge, Mass., at the age of 78 years. Dr. Gray was a graduate in medicine, but after a very short experience in medical work entered upon the study of botany and became, perhaps, the most distinguished of American botanists.

NEW BOOKS RECEIVED.

The Rules of Aseptic and Antiseptic Surgery. A practical treatise for the use of students and the general practitioners, by Arped G. Gerster, M.D. Illustrated with 258 engravings and three chromo-lithographic plates. D. Appleton & Company, New York.

Transactions of the Ohio State Medical Society, 1887.

The Rectum and Anus, their Diseases and Treatment, by Charles B. Bell. With 54 illustrations and 4 colored plates. Philadelphia: Lea Brothers & Co.

Transactions of the American Dermatological Association at the eleventh annual meeting held in Baltimore, 1887.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM FEBRUARY 4, 1888, TO FEBRUARY 10, 1888.

Major Jno. H. Janeway, Surgeon; Capt. Wm. E. Hopkins, Asst. Surgeon, detailed as members of the Army Retiring Board in San Francisco, Cal., convened by S. O. 168, A. G. O., July 22, 1886. S. O. 28, A. G. O., February 4, 1888.

CORRIGENDA.

HYDROFLUORIC ACID IN PHTHISIS.—In the letter of our London correspondent, published in THE JOURNAL January 14, 1888, directions are given to pass a current of air "through a fluid composed of 100 grams of hydrochloric acid and 300 grams of distilled water." Of course the name "*hydrochloric acid*" should have been *hydrofluoric acid* instead, as the context clearly indicates.

ROLL OF PERMANENT MEMBERS.—The name of H. Z. Gill, M.D., El Dorado, Kansas, should have been on the roll of permanent members of the American Medical Association as published in THE JOURNAL December 31, 1887, he having been a member since 1876.

The name of Dr. W. F. Glenn, of Nashville, Tenn., is printed incorrectly as J. W. Glenn. The name of Dr. H. J. Warmuth, of Smyrna, Tenn., was omitted from the list.